

1 Dean N. Kawamoto (SBN 232032)
2 KELLER ROHRBACK L.L.P.
3 1201 Third Avenue, Suite 3200
4 Seattle, WA 98101
5 Tel: (206) 623-1900
6 Facsimile: (206) 623-3384
7 Email: dkawamoto@kellerrohrback.com

Electronically FILED by
Superior Court of California,
County of Los Angeles
2/14/2024 7:50 AM
David W. Slayton,
Executive Officer/Clerk of Court,
By J. Nunez, Deputy Clerk

8 HON. SYLVIA O. HINDS-RADIX
9 Corporation Counsel of the
10 City of New York
11 100 Church Street, Rm 20-87
12 New York, NY 10007
13 Melanie C.T. Ash
14 Aatif Iqbal
15 Tel: (212) 356-2276
16 Email: mash@law.nyc.gov
17 Email: aiqbal@law.nyc.gov

18 *Attorneys for Plaintiffs*

19 *Additional Counsel listed on signature page*

20 SUPERIOR COURT OF THE STATE OF CALIFORNIA
21 COUNTY OF LOS ANGELES
22 UNLIMITED JURISDICTION

23 THE CITY OF NEW YORK; THE CITY
24 SCHOOL DISTRICT OF THE CITY OF NEW
25 YORK; AND NEW YORK CITY HEALTH
26 AND HOSPITALS CORPORATION,

27 Plaintiffs,

28 v.

META PLATFORMS, INC.; FACEBOOK
HOLDINGS, LLC; FACEBOOK
OPERATIONS, LLC; META PAYMENTS
INC.; SICULUS, INC.; INSTAGRAM, LLC;
SNAP INC.; TIKTOK INC.; BYTEDANCE
INC.; TIKTOK PTE. LTD.; BYTEDANCE
LTD.; GOOGLE LLC; and YOUTUBE, LLC,

Defendants.

LASC Case No. 24STCV03643

**COMPLAINT FOR DAMAGES AND
DEMAND FOR JURY TRIAL**

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1. Plaintiffs, the City of New York (the “City”), the City School District of the City of New York d/b/a New York Department of Education (“NYC Public Schools”), and New York City Health and Hospitals Corporation d/b/a New York City Health + Hospitals (“NYC Health + Hospitals”) (together, the “NYC Plaintiffs”) by and through their attorneys, Honorable Sylvia O. Hinds-Radix, Corporation Counsel of the City of New York and Keller Rohrbach L.L.P., allege upon personal knowledge as to themselves and upon information and belief as to all other matters:

I. INTRODUCTION

2. New York City, like other parts of this nation, is battling an unprecedented mental health crisis among its youth and serious disruption to the public health, fueled by Defendants’ creation and promotion of addictive and dangerous social media platforms. Youth are now addicted to Defendants’ platforms in droves, resulting in substantial interference with school district operations and imposing a large burden on cities, school districts and public hospital systems that provide mental health services to youth.

3. In the past decade, Americans’—and New Yorkers’—engagement with social media grew exponentially, nowhere more dramatically than among youth. That explosion in usage is no accident. It is the result of Defendants’ studied efforts to induce youth to compulsively use their social media platforms—Instagram, Facebook, TikTok, Snapchat, and YouTube. Borrowing heavily from the behavioral and neurobiological techniques used in slot machines and exploited by the cigarette industry, Defendants deliberately embedded in their platforms an array of design features aimed at maximizing youth engagement to drive advertising revenue. Defendants know children and adolescents are in a developmental stage that leaves them particularly vulnerable to the addictive effects of these features. Defendants target them anyway, in pursuit of additional profit.

4. The specific design features of Defendants’ platforms vary, but all exploit children and adolescents, to the detriment of NYC Plaintiffs. These dangerous and harmful design features include, but are not limited to, an algorithmically-generated, endless feed to keep users scrolling in an induced “flow state”; “intermittent variable rewards” that manipulate dopamine delivery to

1 intensify use; “trophies” to reward extreme usage; metrics and graphics to exploit social
2 comparison; incessant notifications that encourage repetitive account checking by manufacturing
3 insecurity; inadequate, essentially illusory age verification protocols; and deficient tools for
4 parents that create the illusion of control. Moreover, when adopting these features, Defendants do
5 not take adequate—or any—steps to ensure that they are safe for adolescents.

6 5. The resulting ubiquity of Defendants’ platforms in the palms, brains, and lives of
7 youth in New York City, like other youth across the country, and the ensuing harm, is hard to
8 overstate. Today, over one third of 13- to 17-year-old children nationwide report using one of
9 Defendants’ platforms “almost constantly” and admit this is “too much.” Yet more than half of
10 these kids report that they would struggle to cut back on their social media use. Likewise, in 2021,
11 77.3% of New York City high school students reported spending an average of three or more
12 hours per school day in front of screens—not including spent on schoolwork. Young people in
13 New York City are aware of their addiction to social media—56 percent of Gen Zers self-reported
14 spending “too much time on social media”—but seem powerless to stop. Instead of feeding coins
15 into slot machines, kids are feeding Defendants’ platforms with an endless supply of attention,
16 time, and data.

17 6. This lawsuit follows a growing body of scientific research, including Defendants’
18 own (previously concealed) studies, drawing a direct line from Defendants’ conscious, intentional
19 design choices to the youth mental health crisis gripping our nation. Instagram, Facebook, TikTok,
20 Snapchat, and YouTube have rewired how youth think, learn, feel, and behave. Disconnected
21 “Likes” have replaced the intimacy of adolescent friendships. Mindless scrolling has displaced the
22 creativity of play and sport. While presented as “social,” Defendants’ platforms have in a myriad
23 of ways promoted disconnection, disassociation, and a legion of resulting mental and physical
24 harms.

25 7. The United States Surgeon General (“Surgeon General”) recently explained that
26 children versus Big Tech is “just not a fair fight.”¹ He further stated:

27
28 ¹ Allison Gordon & Pamela Brown, *Surgeon General says 13 is ‘too early’ to join social media*,
(footnote continued)

1 You have some of the best designers and product developers in the world who have
2 designed these products to make sure people are maximizing the amount of time they
3 spend on these platforms. And if we tell a child, use the force of your willpower to
4 control how much time you're spending, you're pitting a child against the world's
5 greatest product designers.

6 8. Over the past decade, Defendants have relentlessly pursued a strategy of growth-at-
7 all-costs, recklessly ignoring the impact of their platforms on children's mental and physical
8 health and well-being,² and refusing to allow researchers access to their data so that the impact on
9 youth could be monitored.³ Instead, in a race to corner the "valuable but untapped" market of
10 tween and teen users, each Defendant designed platform features to promote repetitive,
11 uncontrollable use by kids.⁴

12 9. Youth in New York City and elsewhere are central to Defendants' business models.
13 These age groups are highly connected to the Internet, more likely to have social media accounts,
14 and more likely to devote their downtime to social media usage. Additionally, youth influence the
15 behavior of their parents and younger siblings. As one Defendant put it, "los[ing] the teen foothold
16 in the U.S." would mean "los[ing] the pipeline" for growth.⁵

17 10. Recognizing the power of engaging young users, Defendants have deliberately
18 tweaked the design and operation of their platforms to exploit the psychology and

19 CNN (Jan. 29, 2023), <https://www.cnn.com/2023/01/29/health/surgeon-general-social-media/index.html>.

20 ² See, e.g., Haugen_00000934 at Haugen_00000934 (admission by a Software Engineer at Meta: "It's not a secret that we've often resorted to aggressive tactics in the name of growth, and we've been pretty unapologetic about it.").

21 ³ Marco Zenone *et al.*, *The Social Media Industry as a Commercial Determinant of Health*, 12 Int. J. Health Policy Mgmt. 6840 (2023), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10125226/> ("Many social media platforms implement strict controls on their data for research purposes This creates significant, arguably intentional, difficulties in monitoring social media trends and activity.").

22 ⁴ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667> [<https://perma.cc/AK48-E6HH>]; see also Haugen_00022339.

23 ⁵ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html> [<https://perma.cc/SSL6-QUN2>].

1 neurophysiology of youth. Because children’s and adolescents’ brains are not fully developed,
2 they lack the same emotional maturity, impulse control, and psychological resiliency as adults. As
3 a result, they are uniquely susceptible to addictive features in digital products and highly
4 vulnerable to the consequent harms. Knowing this, Defendants wrote code designed to manipulate
5 dopamine release in children’s developing brains and, in doing so, create compulsive use of their
6 apps.

7 11. Defendants’ strategy paid off. Users of their platforms now number in the billions,
8 and the frequency and time spent by these users has grown exponentially. This has allowed
9 Defendants to harvest a vast amount of personal user data—from the school you attend, to the
10 sneakers you covet, to the places you’ve been and the people you’ve met. This, in turn, has
11 allowed Defendants to mint a fortune, by selling to others the ability to micro-target
12 advertisements to incredibly narrow slices of the public.⁶

13 12. However, Defendants’ growth has come at the expense of its most vulnerable users:
14 children, including those in New York City. Defendants’ choices have generated extraordinary
15 corporate profits—and yielded immense tragedy. Nationwide, suicide rates for youth are up an
16 alarming 57%. Emergency room visits for anxiety disorders are up 117%. In the decade leading up
17 to 2020, there was a 40% increase in high school students reporting persistent sadness and
18 hopelessness, and a 36% increase in those who attempted to take their own lives. In 2019, one in
19 five high school girls had made a suicide plan. In 2021, one in three girls seriously considered
20 attempting suicide.

21 13. In New York City, over 38% of high school students reported feeling so sad or
22 hopeless during the past year that they stopped engaging in their usual activities. The rate of
23 hopelessness among NYC high schoolers in 2021 was almost 50% higher for Latino and Black

24 ⁶ See Snap Inc., Annual Report (Form 10-K) at 15 (Jan. 31, 2023),
25 [https://www.sec.gov/ix?doc=/Archives/edgar/data/0001564408/000156440823000013/snap-](https://www.sec.gov/ix?doc=/Archives/edgar/data/0001564408/000156440823000013/snap-20221231.htm)
26 [20221231.htm](https://www.sec.gov/ix?doc=/Archives/edgar/data/0001564408/000156440823000013/snap-20221231.htm) (“[W]e rely heavily on our ability to collect and disclose data[] and metrics to our
27 advertisers so we can attract new advertisers and retain existing advertisers. Any restriction or
28 inability, whether by law, regulation, policy, or other reason, to collect and disclose data and metrics
which our advertisers find useful would impede our ability to attract and retain advertisers.”).

1 students than for White students, and almost 70% higher for female students than for male
2 students. That same year, over 19 percent of all NYC high school students—and 26.6 percent of
3 girls—reported engaging in self-harm such as cutting or burning themselves, and almost 1 in 10
4 high schoolers in the city reported a suicide attempt.

5 14. Given these troubling statistics, it is not surprising that the City has identified the
6 mental health crisis afflicting its young people as one of its most pressing challenges. In March
7 2023, the City launched *Care, Community, Action: A Mental Health Plan for New York City*, with
8 a particular focus on prevention and care for youth, and preventing future crises for children into
9 adulthood.

10 15. Understanding the urgency of the moment and focused on finding solutions to the
11 youth mental health crisis, in June 2023 the City’s Commissioner of Health, Dr. Ashwin Vasana,
12 convened leaders from around the country—from government, community organizations,
13 education, advocacy, and academia—as well as young people, their caregivers, and families to
14 discuss the impacts of social media on mental health. Based on this convening, the City developed
15 a *Framework for Action* intended to provide resources to families and communities to protect
16 young people, promote well-being, and limit unsafe exposure to “the environmental toxin” of
17 unregulated social media.⁷

18 16. On January 24, 2024, Dr. Vasana issued an Advisory officially designating social
19 media as a public health hazard in New York City.⁸

20 17. At the same time, and notwithstanding those efforts, NYC Plaintiffs have
21 increasingly been forced to expend greater resources and effort to provide the emotional, mental
22 health, and learning support young people need. In order to treat and address the negative youth
23 mental health outcomes that studies show Defendants have caused or contributed to, NYC

24 _____
25 ⁷ N.Y.C. Dep’t of Health & Mental Hygiene, *New York City’s Role in the National Crisis of Social
26 Media and Youth Mental Health: Framework for Action* (Jan. 2024),
27 <https://www.nyc.gov/site/doh/health/health-topics/youth-mental-health-and-social-media.page>.

28 ⁸ *Advisory from the Commissioner of Health and Mental Hygiene of the City of New York*, N.Y.C.
(Jan. 24, 2024), <https://www.nyc.gov/assets/doh/downloads/pdf/notice/2023/coh-advisory-social-media.pdf>.

1 Plaintiffs, burdened by increasing demands on their time and resources, provide crucial
2 emergency, crisis, and inpatient mental health services as well as other community-based services
3 such as outpatient therapy, counseling, and after-school programming for youth.

4 18. Public education serves as the cornerstone of a just and equitable society, with its
5 mission extending far beyond merely imparting knowledge. School districts teach children not
6 only facts and skills, but also the values and tools necessary to engage as informed and responsible
7 citizens. Public school districts, including NYC Public Schools, are facing serious disruptions that
8 interfere with their mission—the effective delivery of public education—caused or contributed to
9 by Defendants’ design, development, production, operation, promotion, distribution, and
10 marketing of addictive and dangerous social media platforms targeting minors. NYC Public
11 Schools has devoted significant resources to combatting students’ addiction to social media and
12 the many resulting harms, including addressing use of Defendants’ platforms during class in
13 violation of school policy and to the detriment of the learning environment, responding to issues
14 relating to social media occurring outside of class, providing counseling for anxiety and
15 depression, and developing curricula about the effects of social media and how to stay safe online.

16 19. Defendants’ actions—and the resulting increased mental health needs of students—
17 have caused NYC Plaintiffs as government bodies to expend and increase resources (including tax
18 dollars) to hire additional counselors, social workers, and other personnel; to train staff on the
19 harmful effects of social media; to create educational materials addressing social media addiction
20 and harm; to investigate and prosecute crimes that can be tied to Defendants’ addictive platforms
21 and the resulting youth mental health crisis; to investigate threats made against schools, students,
22 and members of the community over social media; to alleviate the strain placed on local
23 governments’ departments of health and human services, as well as community-based services
24 such as outpatient therapy, behavioral health services, after school programs, and other similar
25 services and programming; to address harm to young people; and to repair property damage
26 attributable in whole or in part to Defendants’ conduct and addictive platforms.

27 20. Recognizing the strain placed on health care providers, school districts, and other
28 local government bodies, the Surgeon General recently issued an advisory “to highlight the urgent

1 need to address the nation’s youth mental health crisis.”⁹ In a scathing rebuke of the assault on our
2 children, the Surgeon General recognized the dangerous design elements in Defendants’ platforms
3 and Defendants’ abdication of responsibility for the resulting harms:

4 In these digital public spaces, which are privately owned and tend to be run for profit,
5 there can be tension between what’s best for the technology company and what’s best
6 for the individual user or for society. Business models are often built around
7 maximizing user engagement as opposed to safeguarding users’ health and ensuring
8 that users engage with one another in safe and healthy ways[.]

9 **[T]echnology companies must step up and take responsibility for creating a safe**
10 **digital environment for children and youth.** Today, most companies are not
11 transparent about the impact of their products, which prevents parents and young
12 people from making informed decisions and researchers from identifying problems
13 and solutions.¹⁰

14 21. The Surgeon General’s comments have since been echoed by President Biden. In
15 both his 2022 and 2023 State of the Union Addresses, the President urged the nation to “hold
16 social media platforms accountable for the national experiment they’re conducting on our children
17 for profit.”¹¹ In a January 11, 2023 op-ed, President Biden amplified this point: “The risks Big
18 Tech poses for ordinary Americans are clear. Big Tech companies collect huge amounts of data on
19 the things we buy, on the websites we visit, on the places we go and, most troubling of all, on our
20 children.”¹² The President observed that millions of children and adolescents struggle with
21 “violence, trauma and mental health” as a result of Defendants’ conduct and products, and again

22 ⁹ Press Release, U.S. Dep’t of Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on*
23 *Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021),
24 <https://public3.pagefreeser.com/browse/HHS.gov/13-12-2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html>.

25 ¹⁰ Vivek H. Murthy, *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* (2021)
26 at 25–26, <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

27 ¹¹ President Joseph R. Biden, *State of the Union Address* (Mar. 1, 2022),
28 <https://www.whitehouse.gov/state-of-the-union-2022/>; see also President Joseph R. Biden, *State of the Union Address* (Feb. 7, 2023), <https://www.whitehouse.gov/state-of-the-union-2023/>.

¹² Joe Biden, *Republicans and Democrats, Unite Against Big Tech Abuses*, Wall St. J. (Jan. 11, 2023), <https://www.wsj.com/articles/unite-against-big-tech-abuses-social-media-privacy-competition-antitrust-children-algorithm-11673439411> [<https://perma.cc/ST22-5K32>].

1 stated that “[w]e must hold social-media companies accountable” for their role in this crisis.¹³

2 22. These statements by President Biden and the Surgeon General are in line with a
3 substantial body of peer-reviewed scientific literature documenting the harmful impact that
4 Defendants’ platforms have on our children. This body of research confirms that Defendants’
5 platforms can cause addiction, compulsive use, anxiety, depression, eating disorders, body
6 dysmorphia, self-harm, sexual exploitation, suicidal ideations, radicalization, other serious
7 diseases and injuries, and suicide itself. Overall rates of these disorders have increased greatly
8 because of widespread consumption of Defendants’ products by children in this country and
9 across the world.

10 23. In 2018, the National Education Association (“NEA”)—one of the nation’s largest
11 labor unions, and the largest to represent teachers—addressed the evolving research about the
12 impact of social media on students. A 2018 article in “NEA Today,” concluded: “Research
13 suggests social media is increasing student anxiety and depression, eclipsing any positive role it
14 could potentially play.”¹⁴

15 24. In 2022, the American Federation of Teachers—one of the largest teachers’ unions
16 in the United States—joined the #MakeMarkListen campaign, referring to Meta CEO Mark
17 Zuckerberg. Recognizing the harm of social media on students, the campaign is organizing
18 activities to demand oversight and accountability at Meta on behalf of children, based on the
19 substantial harms caused by Meta’s social media platforms. AFT President Randi Weingarten
20 stated: “We’re raising a giant red flag on the impact of Meta on kids’ lives and how its platforms
21 exacerbate the anxiety that comes with navigating our complicated world at a young age.”¹⁵ While
22 this particular effort was aimed at Meta, the behavior of all social media Defendants contributes to

23 ¹³ *Id.*

24 ¹⁴ Kira Barrett, *Social Media’s Impact on Students’ Mental Health Comes Into Focus*, NEA Today
25 (Sept. 27, 2018), <https://www.nea.org/nea-today/all-news-articles/social-medias-impact-students-mental-health-comes-focus>.

26 ¹⁵ Press Release, Am. Fed’n of Tchrs, *AFT Joint National Effort to Demand Corporate Governance*
27 *Reforms at Meta* (May 17, 2022), <https://www.aft.org/press-release/aft-joins-national-effort-demand-corporate-governance-reforms-meta>.

1 the harms identified by this group.

2 25. A recent study commissioned by several organizations—including groups
3 representing teachers, parents, children, and psychologists—wrote that “[o]ur schools are in
4 crisis.”¹⁶ As a direct result of Defendants’ successful promotion, distribution and marketing of
5 their addictive platforms to youth, there has been a “dramatic disruption in the teaching and
6 learning ecosystems of all our nation’s schools.”¹⁷

7 26. Compulsive social media use and addiction are negatively affecting student focus
8 and behavior in school districts across the country. Examples include reduced attention spans,
9 reduced or delayed cognitive development, learning impacts, bad behavior, negative impacts on
10 mental and physical health, depression, and loss of life. Some youth have become violent and
11 have damaged classrooms when a teacher tries to take a student’s phone away—an extreme
12 reaction that is a manifestation of social media addiction. Social media has even inhibited children
13 and teens’ ability to communicate with one another. In New York City, NYC Plaintiffs have
14 observed many of these same problems.

15 27. In addition, the rates of mental health issues among children have climbed steadily
16 since 2010. By 2018, suicide was the second leading cause of death for youth nationwide.¹⁸ As
17 some of the largest providers of youth counseling in the country, school districts have been forced
18 to devote ever-increasing resources to mental health and learning support.

19 28. The youth mental health crisis, fueled by social media, also has a serious negative
20 impact on some school districts’ ability to hire and retain qualified teachers. In many districts,
21 there has been a negative impact on teachers’ morale. Teachers are so desperate for help that in at
22 least one district the teachers raised the issue of social media use during contract negotiations.¹⁹

23 _____
24 ¹⁶ *Likes vs. Learning: The Real Cost of Social Media for Schools*, Am. Fed’n Tchrs. (July 2023),
25 [https://www.aft.org/sites/default/files/media/documents/2023/
LikesVSLearning_Report.pdf](https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf).

26 ¹⁷ *Id.*

27 ¹⁸ Melonie Heron, *Deaths: Leading Causes for 2018*, 70 Nat’l Vital Stats. Reps., 4, 10 (May 17,
2021), <https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-04-508.pdf>.

28 ¹⁹ Donna St. George, *Students can’t get off their phones. Schools have had enough*, Wash. Post (May
(footnote continued)

1 Other districts nationwide have had similar problems with teacher hiring and retention due to
2 Defendants' conduct in creating youth social media addiction.

3 29. As described more fully herein, NYC Plaintiffs, as primary providers of mental
4 health services to children and adolescents in New York City, both individually and in partnership
5 with each other, have found themselves on the frontlines of the struggle to address the youth
6 mental health crisis in the city. NYC Plaintiffs have devoted substantial resources to combat the
7 interference with learning caused by students' compulsive social media use. To that end, NYC
8 Plaintiffs have undertaken the development, design, operation, and management of a complex and
9 comprehensive network of public mental health programs and services available for children and
10 adolescents in New York City.

11 30. For example, multiple City agencies, including in partnership with NYC Health +
12 Hospitals, have established and/or expanded clinical programs and services aimed at tackling the
13 youth mental health crisis, including by:

- 14 a. providing screenings for youth mental health needs whenever City agencies interact
15 with New York City youth;
- 16 b. making phone, text and chat mental health counseling available to all teenagers free
17 of charge; and
- 18 c. developing significant programming and services to treat young people in need of
19 mental health support at public facilities, hospitals, clinics, and in the privacy of their
20 homes.

21 31. Defendants' conduct has also required schools nationwide, including NYC Public
22 Schools, to provide support to students, including mental health services to youth.²⁰ School
23

24 9, 2023), <https://www.washingtonpost.com/education/2023/05/09/school-cellphone-ban-yondr/>
25 [<https://perma.cc/8LV6-6WQ2>].

26 ²⁰ Press Release, EAB, *K-12 Schools Now Primary Providers of Mental Health Services for*
27 *Adolescents* (Feb. 13, 2020), [https://www.globenewswire.com/en/news-](https://www.globenewswire.com/en/news-release/2020/02/13/1984721/0/en/K-12-Schools-Now-Primary-Providers-of-Mental-Health-Services-for-Adolescents.html)
28 [release/2020/02/13/1984721/0/en/K-12-Schools-Now-Primary-Providers-of-Mental-Health-](https://www.globenewswire.com/en/news-release/2020/02/13/1984721/0/en/K-12-Schools-Now-Primary-Providers-of-Mental-Health-Services-for-Adolescents.html)
Services-for-Adolescents.html; *see also* Substance Abuse & Mental Health Servs. Admin., U.S.
Dep't of Health & Hum. Servs., *National Survey on Drug Use and Health*, (2019 & 1st & 4th Qs.
(footnote continued)

1 districts are charged with the important public service of educating youth. In addition to teaching
2 our children how to read and write, NYC Public Schools is tasked with teaching our children how
3 to lead healthy lives, from nutrition to navigating the digital world we live in. Schools cannot
4 ignore the importance of the online world in today’s society. But ensuring that youth know how to
5 avoid the pitfalls of that world, including the addictive and dangerous features of Defendants’
6 platforms, requires ever-increasing time and resources. In that fight, NYC Public Schools’ limited
7 resources are pitted against Defendants’ virtually unlimited resources. This is not a fair fight, and
8 despite considerable effort, schools are losing the battle.

9 32. Defendants knew their actions were having a serious impact on school districts and
10 local governments but have refused to change their conduct.²¹ Indeed, Defendants recognized the
11 importance of infiltrating high schools to their platforms’ success, with Meta for example,
12 categorizing high schools as either Facebook or non-Facebook and analyzing Instagram
13 penetration on a school level, i.e., which school Instagram users attend.²² Similarly, TikTok’s
14 internal documents reveal it knew it was disrupting students’ school day and their sleep, thereby
15 making focusing and paying attention at school more difficult.²³ Once Snapchat knew it had
16 appeal among school-aged children, Snapchat “ran with it and never looked back.”²⁴ And
17 YouTube knew it was the “#1 website regularly visited by kids.”²⁵ Defendants also sell

18
19 2020), <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables> (reporting that over 3.7
20 million children ages 12–17 received mental health services through an education setting in 2019,
21 more than any other non-specialty mental health service setting, per table 9.2A – Settings Where
22 Mental Health Services Were Received in Past Year: Among People Aged 12 to 17; by
23 Demographic Characteristics, Numbers in Thousands, 2019 and 2020).

22 ²¹ See, e.g., META3047MDL-003-00084526.

23 ²² See, e.g., META3047MDL-003-00134688 at META3047MDL-003-00134706; META3047MDL-
24 003-00022355 at META3047MDL-003-00022355.

24 ²³ See, e.g., TIKTOK3047MDL-001-00061318.

25 ²⁴ Billy Gallagher, *How Snapchat Gained Success By Going Viral At High Schools Across Los*
26 *Angeles*, Forbes (Feb. 16, 2018), [https://www.forbes.com/sites/quora/2018/02/16/how-snapchat-](https://www.forbes.com/sites/quora/2018/02/16/how-snapchat-gained-success-by-going-viral-at-high-schools-across-los-angeles/?sh=6f1676083b36)
27 [gained-success-by-going-viral-at-high-schools-across-los-angeles/?sh=6f1676083b36](https://perma.cc/M7LP-ZUAT)
[<https://perma.cc/M7LP-ZUAT>].

28 ²⁵ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit C, *FTC*
(footnote continued)

1 information regarding students’ social media use to advertisers who wish to target youth at school,
2 when they are around other youth, thereby increasing the spread of their advertisements.

3 33. Defendants knew or should have known about the risks of social media addiction—
4 which at least one Defendant euphemistically calls “problematic use.”²⁶ They could have changed
5 their platforms to avoid the harm. They could have warned the public and NYC Plaintiffs about
6 the risks. Instead, Defendants prioritized growth over responsibility.

7 34. Defendants’ wrongful conduct has caused or contributed to a public nuisance within
8 NYC Plaintiffs’ community in the form of a youth mental health crisis. This harm is ongoing and
9 it is producing permanent and long-lasting damage to the NYC Plaintiffs and to public health and
10 welfare. NYC Plaintiffs seek to hold Defendants responsible for the severe disruption their
11 platforms have caused in the community, for the abatement of the nuisance, and for damages,
12 including the expenditure and diversion of significant resources to address youth addiction to
13 social media and related issues resulting from Defendants’ wrongful conduct. Defendants’
14 wrongful conduct includes, but is not limited to:

- 15 a. designing platforms that have disrupted and otherwise harmed NYC Plaintiffs’
16 operations and crucial public services;
- 17 b. failing to provide adequate warnings about serious and reasonably foreseeable health
18 risks from use of the platforms;
- 19 c. failing to utilize reasonable care in, among other things, developing, designing,
20 managing, operating, testing, producing, labeling, marketing, advertising, promoting,
21 controlling, selling, supplying, and distributing their platforms; and

22
23 *v. Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3-1,
https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_exhibits_a-c.pdf.

24 ²⁶ See Haugen_00016373 at Haugen_00016379 (internal Meta report from March 2020 summarizing
25 internal research on “problematic use”—when a user “experienc[es] both of the following issues
26 ‘very often’ or ‘all the time’: Lack of control or feelings of guilt over Facebook use. Negative impact
27 in at least one of the following areas: productivity, sleep, parenting, or relationships.”); *Id.* at
Haugen_00016412; *Id.* at Haugen_00016490 (referring to “problematic use” as “Loss of Control
Over Time Spent” or “LCOTS”); *Id.* at Haugen_00016379 (recognizing that “Problematic Use” is
28 “sometimes referred to as ‘social media addiction’ externally”).

1 d. as to Meta, engaging in the deliberate concealment, misrepresentation, and
2 obstruction of public awareness of serious health risks to users of its platforms.

3 35. Defendants are also negligent. Defendants intend for youth to use their platforms.
4 They owe a duty to youth and to NYC Plaintiffs to not design and market those platforms in a way
5 they know is causing serious harm. They breached their duty to NYC Plaintiffs by purposefully
6 addicting children to their platforms, thereby foreseeably causing harm to NYC Plaintiffs. NYC
7 Plaintiffs are forced to address the serious consequences of Defendants' actions given their
8 mission (and obligation) to provide an adequate education, public facilities, mental health
9 services, counseling, public safety, and other social services and supports.

10 36. Defendants should be held to account for the harms their conduct has inflicted on
11 New York City youth and on the NYC Plaintiffs' educational and public health ecosystems. As it
12 stands now, NYC Plaintiffs are left to abate the nuisance and foot the bill.

13 **II. JURISDICTION AND VENUE**

14 37. This Court has jurisdiction over this action pursuant to Cal. Code Civ. Proc. §§ 395
15 and 410.10.

16 38. This Court has subject matter jurisdiction over all causes of action alleged in this
17 complaint pursuant to Cal. Const. art. VI, § 10, and this is a court of competent jurisdiction to
18 grant the relief requested. Plaintiffs' claims arise under the laws of the State of New York, are not
19 preempted by federal law, do not challenge conduct within any federal agency's exclusive
20 domain, and are not statutorily assigned to any other trial court.

21 39. This Court has general personal jurisdiction over Defendants because each is
22 headquartered and has its principal place of business in the State of California and each has
23 continuous and systematic operations within the State of California.

24 40. This Court also has specific personal jurisdiction over Defendants because they
25 actively do business in Los Angeles County and the State of California. Defendants have
26 purposely availed themselves of the benefits, protections, and privileges of the laws of the State of
27 California through the design, development, programming, manufacturing, promotion, marketing,
28 and distribution of the products at issue and have purposely directed their activities toward this

1 state. Defendants have sufficient minimum contacts with this state to render the exercise of
2 jurisdiction by this Court permissible.

3 41. Venue is proper in Los Angeles Superior Court pursuant to Cal. Code Civ. Proc. §§
4 395 and 395.5 because Defendants regularly conduct business in Los Angeles County and certain
5 of Defendants’ liability arose in Los Angeles County.

6 III. PARTIES

7 A. Plaintiffs

8 a. The City of New York

9 42. Plaintiff the City of New York (the “City”) is a municipal corporation organized
10 under the laws of the State of New York. It comprises five boroughs, each of which is also a
11 county in the state of New York, and has approximately 8.5 million residents. Approximately
12 1,769,710 New Yorkers—20.9% of the New York City population—are under 18 years of age,
13 and roughly 940,000 New Yorkers are adolescents ages 10 to 17.²⁷

14 43. The City also operates its Department of Health and Mental Hygiene (“DOHMH”).
15 DOHMH, the premier public health office in the country, takes the City’s leadership role
16 coordinating mental health services and supports in New York City, and spearheads the City’s
17 response to the growing youth mental health crisis. Through DOHMH and the partnerships it
18 manages, the City offers, coordinates, or connects city residents to outpatient services, including
19 clinic treatment and day treatment; community supports and services, including family and youth
20 peer support programs, early childhood mental health, adolescent skills centers; emergency and
21 crisis services—e.g. children’s mobile crisis teams and home based crisis interventions; and
22 inpatient services provided by, *inter alia*, New York City Health + Hospitals. In offering and
23 coordinating these services, the City, through DOHMH, expends tremendous resources, which
24 have only increased over time in response to increased mental health need.

25
26 ²⁷ Chris Larson, *Talkspace Teams Up with New York City on Teen Mental Health Partnership,*
27 *Similar Deals to Follow*, Behav. Health Bus. (Nov. 15, 2023),
28 <https://bhbusiness.com/2023/11/15/talkspace-teams-up-with-new-york-city-on-teen-mental-health-partnership-similar-deals-to-follow/>.

1 **b. New York City Public Schools**

2 44. Plaintiff New York City Department of Education (“NYC Public Schools”) is a city
3 school district created under the laws of the state of New York which operates over 1,800 schools
4 in New York City. Approximately one million students are enrolled in NYC Public Schools,
5 making it the largest school district in the United States.²⁸

6 **c. New York City Health + Hospitals**

7 45. Plaintiff, New York City Health + Hospitals (“NYC Health + Hospitals”) is a public
8 benefit corporation incorporated under the laws of the state of New York to operate New York
9 City’s municipal hospital system, the largest public hospital and health care system in the country.
10 It operates 11 municipal acute care hospitals with nearly 5,000 beds, 5 long term care facilities
11 with nearly 3,000 beds, 6 free-standing diagnostic and treatment centers, and more than 70
12 community-based healthcare centers and extension clinics.²⁹ NYC Health + Hospitals serves more
13 than 1.2 million New Yorkers annually.³⁰

14 46. The City, NYC Public Schools, and NYC Health + Hospitals are referred to
15 collectively herein as “NYC Plaintiffs.”

16 **B. Meta Defendants**

17 47. Defendant Meta Platforms, Inc. (“Meta”) is a multinational technology
18 conglomerate, having its principal place of business in Menlo Park, California. Meta designs,
19 develops, owns, operates, and markets social media products, communication products, and
20 electronic devices, including Facebook and Instagram, which are available to minors throughout
21 the United States.³¹ Meta was originally incorporated in Delaware on July 29, 2004, as
22

23 ²⁸ *DOE Data at a Glance*, N.Y.C. Pub. Schs., [https://www.schools.nyc.gov/about-us/reports/doe-data-at-](https://www.schools.nyc.gov/about-us/reports/doe-data-at-a-glance)
24 [a-glance](https://www.schools.nyc.gov/about-us/reports/doe-data-at-a-glance) (last visited Feb. 12, 2024); Attiya Zainib, *30 Best School Districts in USA*, Yahoo! Fin.
(Oct. 31, 2023), <https://finance.yahoo.com/news/30-best-school-districts-usa-065831116.html>.

25 ²⁹ *Report on the Fiscal 2024 Preliminary Plan and the Fiscal 2023 Mayor’s Management Report for*
26 *the New York City Health + Hospitals*, N.Y.C. Council Fin. Div., (Mar. 21, 2023),
<https://council.nyc.gov/budget/wp-content/uploads/sites/54/2023/03/HH.pdf>.

27 ³⁰ *Id.*

28 ³¹ These products include Facebook (its self-titled app, Messenger, Messenger Kids, Marketplace,
(footnote continued)

1 “TheFacebook, Inc.” On September 20, 2005, the company changed its name to “Facebook, Inc.”
2 On October 28, 2021, the company assumed its current designation. While NYC Plaintiffs have
3 attempted to identify the specific Meta subsidiary(s) that committed each of the acts alleged in this
4 Complaint, NYC Plaintiffs were not always able to do so, in large part due to ambiguities in
5 Meta’s and its subsidiaries’ own documents, public representations, and lack of public
6 information. However, upon information and belief, Meta oversees the operations of its various
7 platforms and subsidiaries, some of which have been identified and are listed below. For this
8 reason, unless otherwise specified, the shorthand “Meta” contemplates the apparent control that
9 Meta wields over its subsidiaries’ overall operations and, therefore, further refers to its various
10 subsidiaries and predecessors. To the extent this assumption is incorrect, the knowledge of which
11 Meta subsidiary, current or former, is responsible for specific conduct is knowledge solely within
12 Meta’s possession, the details of which NYC Plaintiffs should be permitted to obtain during the
13 discovery phase.

14 48. Meta’s subsidiaries include, but may not be limited to: Facebook Holdings, LLC;
15 Facebook Operations, LLC; Instagram, LLC; and a dozen other entities whose identity or
16 relevance is presently unclear.

17 49. Defendant Facebook Holdings, LLC (“Facebook Holdings”) was incorporated in
18 Delaware on March 11, 2020, and is a wholly owned subsidiary of Meta. Facebook Holdings is
19 primarily a holding company for entities involved in Meta’s supporting and international
20 endeavors, and its principal place of business is in Menlo Park, California.

21 50. Defendant Facebook Operations, LLC (“Facebook Operations”) was incorporated in
22 Delaware on January 8, 2012, and is a wholly owned subsidiary of Meta. Facebook Operations is
23 likely a managing entity for Meta’s other subsidiaries, and its principal place of business is in
24 Menlo Park, California.

25 51. Defendant Meta Payments Inc. (“Meta Payments”) is a wholly owned subsidiary of
26

27 Workplace, etc.), Instagram (and its self-titled app), and a line of electronic virtual reality devices
28 called Oculus Quest (soon to be renamed “Meta Quest”).

1 Meta. Meta Payments processes and manages payments made through Meta. Meta Payments’
2 principal place of business is in Menlo Park, California. Meta Payments was incorporated in
3 Florida on December 10, 2010, as Facebook Payments Inc. In July 2022, the entity’s name was
4 amended to Meta Payments Inc.

5 52. Defendant Siculus, Inc. (“Siculus”) was incorporated in Delaware on October 19,
6 2011. Siculus is a wholly owned subsidiary of Meta. Siculus constructs data facilities that support
7 Meta’s platforms. Siculus’s principal place of business is in Menlo Park, California.

8 53. Defendant Instagram, LLC (“Instagram”) was founded in October 2010. In April
9 2012, Meta purchased Instagram for \$1 billion (later statements from Meta have indicated the
10 purchase price was closer to \$2 billion). Meta reincorporated Instagram in Delaware on April 7,
11 2012. Instagram’s principal place of business is in Menlo Park, California. Instagram is a social
12 media platform tailored for photo and video sharing.

13 **C. Defendant Snap Inc.**

14 54. Defendant Snap Inc. (“Snap”) was founded in 2011 and is incorporated in Delaware .
15 Snap’s principal place of business in Santa Monica, California. Snap designs, develops, owns,
16 markets, and operates the Snapchat social media platform, an application that is widely marketed
17 by Snap and available to minors throughout the United States. Snapchat is social media platform
18 for engaging in text, picture, and video communication, as well as other features of Snapchat’s
19 own design.

20 **D. TikTok Defendants**

21 55. Defendant TikTok Inc. (“TikTok”) is incorporated in California and its principal
22 place of business is in Culver City, California. TikTok designs, develops, owns, markets, and
23 operates the TikTok social media platform, an application that is widely marketed by TikTok and
24 available to youth throughout the United States. TikTok is known as a video-sharing application,
25 where users can create, share, and view short video clips. TikTok has a valuation of at least \$50-
26 75 billion. TikTok made nearly \$4 billion in revenue in 2021 and an estimated \$10-12 billion in
27 2022.

28 56. Defendant ByteDance Inc. (“ByteDance”) is incorporated in Delaware and its

1 principal place of business is in Mountain View, California. ByteDance designs, owns, develops,
2 markets, and/or operates TikTok, and designs, owns, develops, markets, and/or operates the
3 TikTok social media platform.

4 57. Defendant TikTok Pte. Ltd. (“TikTok Pte.”), a related corporate entity, is
5 headquartered in Singapore. TikTok Pte. is nominally listed in the Apple App Store, Google Play
6 Store, and Microsoft Store.

7 58. Defendant ByteDance Ltd. is a multinational internet technology holding company
8 and is the parent company of TikTok, TikTok Pte., and ByteDance. ByteDance Ltd. is
9 headquartered in Beijing, China and registered in the Cayman Islands. ByteDance Ltd. designs,
10 owns, and/or operates TikTok, and designs, owns, and/or operates the TikTok social media
11 platform.

12 **E. YouTube Defendants**

13 59. Defendant Google LLC (“Google”) is a limited liability company incorporated in
14 Delaware, and its principal place of business is in Mountain View, California. Google is a wholly
15 owned subsidiary of XXVI Holdings Inc., and the managing member of YouTube, LLC. Google
16 transacts or has transacted business in this County and throughout the United States. At all times
17 material to this Complaint, acting alone or in concert with others, Google has advertised,
18 marketed, and distributed its YouTube video sharing platform to minors throughout the United
19 States. At all times material to this Complaint, acting alone or in concert with YouTube, LLC,
20 Google formulated, directed, controlled, had the authority to control, or participated in the acts
21 and practices set forth in this Complaint.

22 60. Defendant YouTube, LLC (“YouTube”) is a limited liability company incorporated
23 in Delaware, and its principal place of business is in San Bruno, California. YouTube is a wholly
24 owned subsidiary of Google. YouTube transacts or has transacted business in this County and
25 throughout the United States. At all times material to this Complaint, acting alone or in concert
26 with defendant Google, YouTube has designed, developed, operated, advertised, marketed, and
27 distributed its YouTube social media platform to consumers throughout the United States. At all
28 times material to this Complaint, acting alone or in concert with Google, YouTube formulated,

1 directed, controlled, had the authority to control, or participated in the acts and practices set forth
2 in this Complaint.

3 IV. FACTUAL ALLEGATIONS

4 A. GENERAL FACTUAL ALLEGATIONS APPLICABLE TO ALL DEFENDANTS

5 1. Defendants have targeted school-aged children as a core market.

6 61. Each Defendant has designed, developed, produced, operated, promoted, distributed,
7 and marketed its social media platform(s) to maximize the number of children, including youth in
8 NYC Plaintiffs' community, who download and use them compulsively. Defendants' platforms
9 are powerfully addictive and have succeeded in capturing the time and attention of young users.
10 Researchers studying the effect that social media has on the brain have shown that social media
11 exploits "the same neural circuitry" as "gambling and recreational drugs to keep consumers using
12 their platforms as much as possible."³²

13 62. Children are more vulnerable users of Defendants' platforms and have more free
14 time than their adult counterparts. Because children use Defendants' platforms more than adults,
15 they see more ads, and as a result generate more ad revenue for Defendants. Young users also
16 generate a trove of data about their preferences, habits, and behaviors. Information about their
17 users is Defendants' most valuable commodity. Defendants mine and commodify that data, selling
18 to advertisers the ability to reach incredibly narrow tranches of the population, including children.
19 Each Defendant placed its platforms into the stream of commerce and generated revenues through
20 the distribution of those platforms at the expense of the public and NYC Plaintiffs. This
21 exploitation of children, including youth in NYC Plaintiffs' community, has become central to
22 Defendants' profitability.

23 63. Recognizing the vulnerability of children under 13, particularly in the Internet Age,
24 Congress enacted the Children's Online Privacy Protection Act ("COPPA") in 1999.³³ COPPA
25

26 ³² *Social Media Addiction: What is Social Media Addiction?*, Addiction Ctr.,
27 <https://www.addictioncenter.com/drugs/social-media-addiction/>.

28 ³³ See 15 U.S.C. §§ 6501–6506.

1 regulates the conditions under which Defendants can collect, use, or disclose the personal
2 information of children under 13. Under COPPA, developers of platforms and websites that are
3 directed to or known to be used by children under 13 cannot lawfully obtain the individually
4 identifiable information of such children without first obtaining verifiable consent from their
5 parents.³⁴ Even apart from COPPA, it is well established under the law that children lack the legal
6 or mental capacity to make informed decisions about their own well-being.

7 64. COPPA was enacted precisely because Congress recognized that children under age
8 13 are particularly vulnerable to being taken advantage of by unscrupulous website operators. As a
9 June 1998 report by the FTC observed, “[t]he immediacy and ease with which personal
10 information can be collected from children online, combined with the limited capacity of children
11 to understand fully the potentially serious safety and privacy implications of providing that
12 information, have created deep concerns about current information practices involving children
13 online.”³⁵ The same report observed that children under the age of 13 “generally lack the
14 developmental capacity and judgment to give meaningful consent to the release of personal
15 information to a third party.”³⁶

16 65. Contemporaneous testimony by the Chairman of the FTC observed that the Internet
17 “make[s] it easy for children to disclose their personal information to the general public without
18 their parents’ awareness or consent. Such public disclosures raise safety concerns.”³⁷ Further, “the

19
20 ³⁴ The Federal Trade Commission (“FTC”) clarified that acceptable methods for obtaining verifiable
21 parental consent include: (a) providing a form for parents to sign and return; (b) requiring the use of
22 a credit card, debit card, or other online payment system that provides notification of each
23 transaction to the primary account holder; (c) connecting to trained personnel via video-conference;
24 (d) calling a toll-free number staffed by trained personnel; (e) asking knowledge-based challenge
25 questions; or (f) verifying a photo-ID from the parent compared to a second photo using facial
26 recognition technology. *Complying with COPPA: Frequently Asked Questions*, FTC (July 2020),
27 <https://www.ftc.gov/business-guidance/resources/complying-coppa-frequently-asked-questions>.

28 ³⁵ *Privacy Online: A Report to Congress* at 6, FTC (1998),
<https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf>.

³⁶ *Id.* at 5.

³⁷ *S. 2326, Children’s Online Privacy Protection Act of 1998: Hearing Before the Subcomm. on
Comm’ns of the Comm. on Com., Sci., & Transp. U.S. S., 105th Cong. 10 (1998)*,
(footnote continued)

1 practice of collecting personal identifying information directly from children without parental
2 consent is clearly troubling, since its [sic] teaches children to reveal their personal information to
3 strangers and circumvents parental control over their family’s information.”³⁸

4 66. None of the Defendants conduct proper age verification or authentication. Instead,
5 each Defendant relies on users to self-report their age. This unenforceable and facially inadequate
6 system allows children under 13 to easily create accounts on Defendants’ platforms. Defendants
7 know this, which is why they have not implemented necessary and robust age verification or
8 authentication features.

9 67. This is particularly egregious for two reasons. First, Defendants have long been on
10 notice of the problem. For instance, in May 2011, *Consumer Reports* reported the “troubling
11 news” that 7.5 million children age 12 and younger were on Facebook.³⁹ Second, given that
12 Defendants have developed and utilized age-estimation algorithms for the purpose of selling user
13 data and targeted advertisements, Defendants could readily use these algorithms to prevent
14 children under 13 from accessing their platforms, but choose not to do so. Instead, they have
15 turned a blind eye to collecting children’s data in violation of COPPA and leave NYC Plaintiffs to
16 fund treatment and services to remedy the harms that Defendants cause.

17 68. Defendants have done this because children are financially lucrative, particularly
18 when they are addicted to or compulsively using Defendants’ platforms.

19 **2. Children are uniquely susceptible to harm from Defendants’ platforms.**

20 69. The frontal lobes of the brain—particularly the prefrontal cortex—control higher-
21 order cognitive functions. This region of the brain is central to planning and executive decision-
22 making, including the evaluation of future consequences and the weighing of risk and reward. It
23

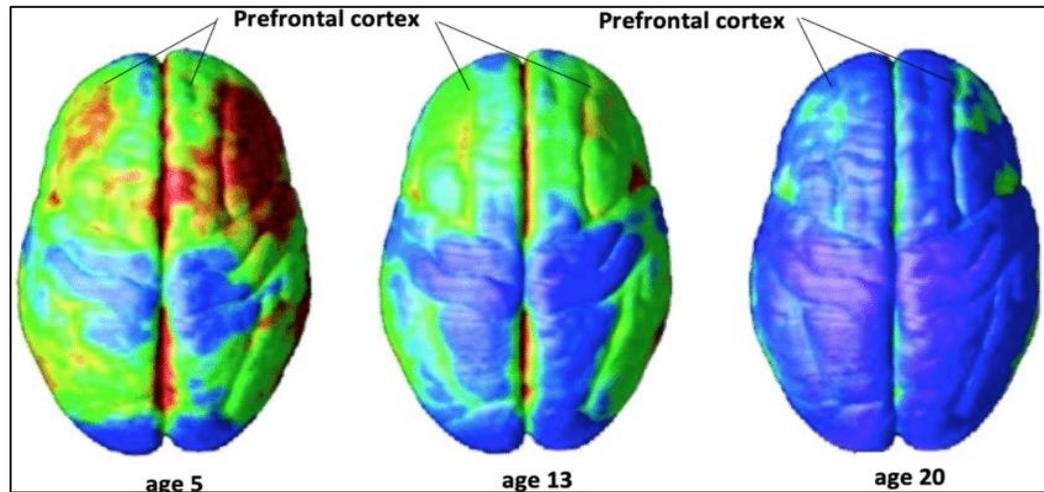
24 <https://babel.hathitrust.org/cgi/pt?id=uc1.b5182874&seq=1&q1=it+easy+for+> (prepared statement
25 of Robert Pitofsky, Chairman, FTC).

26 ³⁸ *Id.* at 11.

27 ³⁹ Emily Bazelon, *Why Facebook is After Your Kids*, N.Y. Times (Oct. 12, 2011),
28 <https://www.nytimes.com/2011/10/16/magazine/why-facebook-is-after-your-kids.html>
[<https://perma.cc/7EY7-KFF5>].

1 also helps inhibit impulsive actions and “regulate emotional responses to social rewards.”⁴⁰

2 70. Children and adolescents are especially vulnerable to developing harmful behaviors
3 because their prefrontal cortex is not fully developed.⁴¹ Indeed, it is one of the last regions of the
4 brain to mature.⁴² In the images below, the blue color depicts brain development.⁴³



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13 71. Because the prefrontal cortex develops later than other areas of the brain, children
14 and adolescents, as compared with adults, have less impulse control and less ability to evaluate
15 risks, regulate emotions and regulate their responses to social rewards.

16
17 72. Social rewards deliver a rush of dopamine and oxytocin, sometimes called the
18 “happy hormones,” to the part of the brain called the ventral striatum.⁴⁴ Dopamine is a

19
20 ⁴⁰ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

21
22 ⁴¹ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation
model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry
279 (2022), [https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-
7.pdf](https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf).

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24 ⁴² *Id.*; see also Fulton Crews *et al.*, *Adolescent cortical development: A critical period of
vulnerability for addiction*, 86 *Pharmacology Biochemistry & Behav.* 189–199, 191 (2007),
<https://doi.org/10.1016/j.pbb.2006.12.001> [<https://perma.cc/Z26H-JKYN>].

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27 ⁴³ Heiner Böttger & Deborah Költzsch, *The fear factor: Xenoglossophobia or how to overcome the
anxiety of speaking foreign languages*, 4(2) *Training Language & Culture* 43-55, 46 (2020),
[https://www.researchgate.net/publication/342501707_The_fear_factor_Xenoglossophobia_or_how_t
o_overcome_the_anxiety_of_speaking_foreign_languages](https://www.researchgate.net/publication/342501707_The_fear_factor_Xenoglossophobia_or_how_to_overcome_the_anxiety_of_speaking_foreign_languages).

28 ⁴⁴ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
(footnote continued)

1 neurotransmitter that is central to the brain’s reward system.⁴⁵ While the same hormones are
2 released in youth and adults, there are two key differences. As Professor Mitch Prinstein, Chief
3 Science Officer of the American Psychological Association explained: “First, adults tend to have a
4 fixed sense of self that relies less on feedback from peers. Second, adults have a more mature
5 prefrontal cortex, an area that can help regulate emotional responses to social rewards.”⁴⁶

6 73. Although the decision-making region of the brain is still not fully developed, regions
7 such as the ventral striatum, which are involved in the reward pathway and closely tied to social
8 media activity, begin to develop during adolescence.⁴⁷

9 74. Between the ages of 10 and 12, dopamine receptors multiply in the ventral striatum,
10 which makes social rewards—like compliments or laughter from a friend—more pleasant, and
11 adolescents become more sensitive to attention from others.⁴⁸ Adolescents are at a stage where
12 their personalities and identities are forming, much of which “is now reliant on social media.”⁴⁹

13 75. During development, the brain is exposed to stimuli (e.g., Instagram) that becomes
14 associated with a reward (e.g., Likes) and a release of dopamine throughout the reward pathway.
15 The feeling derived during the reward experience drives an individual to seek out the stimulus
16 again, and the association between stimulus and reward grows stronger with repetitive
17 activation.⁵⁰ Repeated spikes of dopamine over time may cause “neuroadaptation,” where the
18 brain adapts for the increased dopamine levels caused by external stimuli by downregulating its
19

20 (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

21 ⁴⁵ *Id.*

22 ⁴⁶ *Id.*

23 ⁴⁷ *Id.*

24 ⁴⁸ *Id.*

25 ⁴⁹ Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and*
psychological distress in adolescents, 25(1) *Int’l J. Adolescence & Youth* 79–93, 81 (2019),
26 <https://www.tandfonline.com/doi/epdf/10.1080/02673843.2019.1590851?needAccess=true>.

27 ⁵⁰ Bryon Adinoff, *Neurobiologic Processes in Drug Reward and Addiction*, 12(6) *Harv. Rev.*
Psychiatry 305-320 (2004), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/pdf/nihms17876.pdf)
28 [pdf/nihms17876.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/pdf/nihms17876.pdf).

1 production of and sensitivity to dopamine.⁵¹ As a result, the individual develops tolerance, and the
2 brain requires increasingly more of a stimulus to experience the same feeling of reward.

3 76. Imaging studies show that during a period of craving, there are also decreases in
4 frontal cortex activity and executive functioning, leading to impaired “decision making, self-
5 regulation, inhibitory control, and working memory.”⁵²

6 77. As New York University professor and social psychologist Adam Alter has
7 explained, features such as “Likes” give users a dopamine hit similar to drugs and alcohol:

8 The minute you take a drug, drink alcohol, smoke a cigarette ... when you get a like
9 on social media, all of those experiences produce dopamine, which is a chemical
10 that’s associated with pleasure. When someone likes an Instagram post ... it’s a little
11 bit like taking a drug. As far as your brain is concerned, it’s a very similar
12 experience.⁵³

13 78. Notably, once the brain has learned to make this association, dopaminergic neurons
14 “shift their ... activation from the time of reward delivery to the time of presentation of [a]
15 predictive cue[.]”⁵⁴ In other words, the anticipation of a reward can itself trigger a dopamine rush.

16 79. Conversely, if the stimulus is withheld, feelings of fatigue and anxiety or depression
17 may be experienced, along with decreased sensitivity to the stimulant, which is associated with the
18 withdrawal component of addiction.⁵⁵ Youth are more susceptible than adults to feelings of

19 ⁵¹ George F. Koob & Nora D. Volkow, *Neurobiology of addiction: A neurocircuitry analysis*, 3(8)
20 *Lancet Psychiatry* 760-773 (2016), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/
21 pdf/nihms-985499.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf).

22 ⁵² *Id.* at 8.

23 ⁵³ Eames Yates, *What happens to your brain when you get a like on Instagram*, *Bus. Insider* (Mar.
24 25, 2017), [https://www.businessinsider.com/what-happens-to-your-brain-like-instagram-dopamine-
25 2017-3](https://www.businessinsider.com/what-happens-to-your-brain-like-instagram-dopamine-2017-3); see also Sören Krach *et al.*, *The rewarding nature of social interactions*, 4(22) *Frontiers*
26 *Behav. Neuroscience* 1 (2010), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-
27 04-00022.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf); Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, *Vice* (May 17,
28 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

⁵⁴ Luisa Speranza *et al.*, *Dopamine: The Neuromodulator of Long-Term Synaptic Plasticity, Reward and Movement Control* at 8, 10 *Cells* 735 (2021), [https://www.ncbi.nlm.nih.gov/pmc/articles/
PMC8066851/pdf/cells-10-00735.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8066851/pdf/cells-10-00735.pdf).

⁵⁵ U.S. Dep’t of Health & Hum. Servs., *Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health* (2016), [https://www.ncbi.nlm.nih.gov/books/NBK424857/pdf/
Bookshelf_NBK424857.pdf](https://www.ncbi.nlm.nih.gov/books/NBK424857/pdf/Bookshelf_NBK424857.pdf).

1 withdrawal when a dopamine hit wears off. Depending on the intensity, delivery, and timing of
2 the stimulus, and the severity of its withdrawal, these feelings can include emotional pain,
3 dysphoria, and irritability.⁵⁶ Children and adolescents also are more likely to engage in
4 compulsive behaviors to avoid these symptoms, due to their limited capacity for self-regulation,
5 relative lack of impulse control, and struggle to delay gratification. Together, this means that
6 children and adolescents are uniquely vulnerable and easy targets for the reward-based systems
7 that Defendants build into their social media platforms.

8 80. A recent article coauthored by former Google CEO Eric Schmidt and social
9 psychologist Jonathan Haidt warns that “the greatest damage from social media seems to occur
10 during the rapid brain rewiring of early puberty, around ages 11 to 13 for girls and slightly later
11 for boys.”⁵⁷ Schmidt and Haidt urged action, writing that “we must protect children from
12 predation and addiction most vigorously during this time, and we must hold companies
13 responsible for recruiting or even just admitting underage users[.]”⁵⁸ As they point out, “[a]s long
14 as children say that they are 13, the platforms let them open accounts, which is why so many
15 children are heavy users of Instagram, Snapchat, and TikTok by age 10 or 11.”⁵⁹

16 81. Studies indicate that social rewards such as reputation, maternal and romantic love,
17 positive emotional expressions, and the stimuli of perceived beautiful faces are processed along
18 the same neural reward network as non-social rewards and drug addiction.⁶⁰ Dopamine receptors
19 were found reduced in the striatum (central component of the reward system) of the brain in

21 ⁵⁶ George F. Koob & Nora D. Volkow, *Neurobiology of addiction: A neurocircuitry analysis* at 5,
22 3(8) *Lancet Psychiatry* 760-773 (2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf>.

23 ⁵⁷ Jonathan Haidt & Eric Schmidt, *AI Is About to Make Social Media (Much) More Toxic*, *Atl.* (May
24 5, 2023), <https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/> [<https://perma.cc/7WCA-RWHR>].

25 ⁵⁸ *Id.*

26 ⁵⁹ *Id.*

27 ⁶⁰ Sören Krach *et al.*, *The rewarding nature of social interactions*, 4(22) *Frontiers Behav.*
28 *Neuroscience* 1 (2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf>.

1 individuals with Internet addiction.⁶¹ Like other addicting products, Defendants’ platforms hook
2 their users by disrupting their brains’ reward circuitry.

3 82. When the release of dopamine in young brains is manipulated by Defendants’
4 platforms, it interferes with the brain’s development and can have long-term impacts on an
5 individual’s memory, affective processing, reasoning, planning, attention, inhibitory control, and
6 risk-reward calibration.

7 83. “Everyone innately responds to social approval, but some demographics, in
8 particular teenagers, are more vulnerable to it than others.”⁶² Given their limited capacity to self-
9 regulate and their vulnerability to peer pressure, children (including teens) are at greater risk of
10 developing a mental disorder from use of Defendants’ platforms.⁶³

11 84. This can lead to a vicious cycle. Repeated spikes of dopamine over time may cause a
12 child to build up a tolerance for the stimulus. In this process of “neuroadaptation,” the production
13 of dopamine and the sensitivity of dopamine receptors are both reduced. As a consequence, the
14 child requires more and more of the stimulus to feel the same reward. Worse, this cycle can cause
15 decreases in activity in the prefrontal cortex, leading to further impairments of decision-making
16 and executive functioning.

17 85. As described further below, each Defendant deliberately designed, developed,
18 engineered, and implemented dangerous features in their platforms that limit the ability of
19 children and their parents to control social media use and present social-reward and other stimuli
20 in a manner that has caused youth in NYC Plaintiffs’ community to compulsively seek out those
21 stimuli, develop negative symptoms when they were withdrawn, and exhibit reduced impulse

22 ⁶¹ Sang Hee Kim *et al.*, *Reduced striatal dopamine D2 receptors in people with Internet addiction*,
23 22 *NeuroReport* 407–411 (2011), <https://pubmed.ncbi.nlm.nih.gov/21499141/>
24 [<https://perma.cc/7278-RECR>].

25 ⁶² Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
<https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

26 ⁶³ Betül Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and*
27 *psychological distress in adolescents*, 25(1) Int’l J. Adolescence & Youth 79–93, 81 (2019),
28 <https://www.tandfonline.com/doi/epdf/10.1080/02673843.2019.1590851?needAccess=true>.

1 control and emotional regulation.

2 86. In short, children find it particularly difficult to exercise the self-control required to
3 regulate their use of Defendants’ platforms, given the stimuli and rewards embedded in those
4 platforms, and as a foreseeable and probable consequence of Defendants’ design choices tend to
5 engage in addictive and compulsive use.⁶⁴ Defendants engaged in this conduct even though they
6 knew or should have known that their design choices would have a detrimental effect on youth,
7 including those in NYC Plaintiffs’ community, leading to serious problems in schools and the
8 community.

9 87. Adding to the harm caused to children and teens, Defendants’ social media platforms
10 generate never-ending and heightened social comparison. The need to compare oneself to other
11 individuals is a hard-wired characteristic of being human and is biologically powerful. But
12 Defendants’ platforms create an unnatural environment of constant social comparison due to
13 filters and other features that Defendants have designed and developed. This is by design: social
14 comparison is yet another aspect of human psychology that Defendants intentionally manipulate
15 through the design of their platforms and features to maximize “user engagement” and, in turn,
16 profits. For children and teens, this has significant public health consequences. As the Surgeon
17 General warned, “[s]ocial comparison driven by social media is associated with body
18 dissatisfaction, disordered eating, and depressive symptoms.”⁶⁵ This has significant consequences
19 for NYC Plaintiffs, as described below.

20 88. These consequences of Defendants’ conduct are no surprise. Since the early 2000s,
21 studies have shown that frequent upward social comparison results in lower self-esteem and
22 reduced overall mental health.⁶⁶

24 ⁶⁴ Fulton Crews *et al.*, *Adolescent cortical development: A critical period of vulnerability for*
25 *addiction*, 86 *Pharmacology Biochemistry & Behav.* 189–199, 194 (2007),
<https://doi.org/10.1016/j.pbb.2006.12.001> [<https://perma.cc/Z26H-JKYN>].

26 ⁶⁵ Vivek H. Murthy, Office of the Surgeon General, *Social Media and Youth Mental Health: The*
27 *U.S. Surgeon General’s Advisory* (2023) at 8, <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf>.

28 ⁶⁶ Claire Midgley *et al.*, *When Every Day is a High School Reunion: Social Media Comparisons and*
(footnote continued)

1 89. Defendants powerfully promote social comparison by getting as many young people
2 as possible to join and stay on their platforms, and by maximizing user time spent on the
3 platforms, including through feeding their algorithms data collected and organized by Defendants’
4 design features. Social-media-induced social comparison often results in a discrepancy between
5 the idealized self and the real self, evoking a sense of depression, deprivation, and distress. This is
6 further exacerbated by Defendants’ use of physical-augmentation technology, which allows users
7 to utilize photo and video filters to remove blemishes, make their faces appear thinner, and lighten
8 skin tone, all to make themselves appear more “attractive.” Appearance-altering filters are widely
9 used across Defendants’ platforms. Especially in combination with the platforms’ general-feed
10 algorithm, these filters can cause users to make false comparisons between their real-life
11 appearances and the appearances in the feed. These features can also cause users to make negative
12 comparison between their appearance with a filter and without one. As alleged below,
13 whistleblower documents show that Meta has long been aware of the harm these features can
14 cause.

15 90. Defendants’ image-altering filters cause mental health harms in multiple ways.⁶⁷
16 First, because of the popularity of these editing tools, many of the images teenagers see have been
17 edited by filters, and it can be difficult for teenagers to remain cognizant of the use of filters. This
18 creates a false reality wherein all other users on the platforms appear better looking than they
19 actually are, often in an artificial way. As children and teens compare their actual appearances to
20 the edited appearances of themselves and others online, their perception of their own physical
21 features grows increasingly negative. Second, Defendants’ platforms tend to reward edited photos,
22 through an increase in interaction and positive responses, causing young users to prefer the way

23 *Self-Esteem*, 121(2) J. Personality & Soc. Psych. 285–307 (2020),
24 https://www.researchgate.net/publication/342490065_When_Every_Day_is_a_High_School_Reunion_Social_Media_Comparisons_and_Self-Esteem.

25 ⁶⁷ Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*
26 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),
27 <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>
28 [<https://perma.cc/Z8RQ-TC49>].

1 they look using filters. Many young users believe they are only attractive when their images are
2 edited, not as they appear naturally. Third, the specific changes filters make to individuals'
3 appearances can cause negative obsession or self-hatred surrounding particular aspects of their
4 appearance. The filters alter specific facial features such as eyes, lips, jaw, face shape, and face
5 slimness—features that often require medical intervention to alter in real life.

6 91. In a 2016 study, 52% of girls said they use image filters every day, and 80% have
7 used an app to change their appearance before the age of 13.⁶⁸ In fact, 77% of girls reported trying
8 to change or hide at least one part of their body before posting a photo of themselves, and 50%
9 believe they do not look good without editing.⁶⁹ Filters, especially in combination with other
10 design features, directly cause body image issues, eating disorders, body dysmorphia, and related
11 issues.⁷⁰ As one study of 481 university students found, spending more time viewing selfies can
12 increase dissatisfaction with one's own face, and spending more time looking at selfies (and
13 reviewing likes and comments) can cause users to draw more comparisons between themselves
14 and others, prompting even more self-criticism.⁷¹ As one psychodermatologist explained, "these

15 ⁶⁸ *Id.*

16 ⁶⁹ *Id.*; see also Jia Tolentino, *The Age of Instagram Face*, *New Yorker* (Dec. 12, 2019),
17 <https://www.newyorker.com/culture/decade-in-review/the-age-of-instagram-face>
18 [<https://perma.cc/W7NJ-JZ6W>] ("Instagram announced that it would be removing 'all effects
19 associated with plastic surgery' from its filter arsenal, but this appears to mean all effects explicitly
20 associated with plastic surgery, such as the ones called 'Plastica' and 'Fix Me.' Filters that give you
21 Instagram Face will remain.").

22 ⁷⁰ See Sian McLean *et al.*, *Photoshopping the selfie: Self photo editing and photo investment are*
23 *associated with body dissatisfaction in adolescent girls*, 48 *Int'l J. Eating Disorders* 1132–1140,
24 1133 (2015), <https://pubmed.ncbi.nlm.nih.gov/26311205/> [<https://perma.cc/PE83-EKV4>] (presenting
25 a 2015 study involving 101 adolescent girls, more time spent editing and sharing selfies on social
26 media raised their risk of experiencing body dissatisfaction and disordered eating habits); Jing Yang
27 *et al.*, *Selfie-Viewing and Facial Dissatisfaction among Emerging Adults: A Moderated Mediation*
28 *Model of Appearance Comparisons and Self-Objectification*, 17 *Int'l J. Env't Rsch. & Pub. Health*
672 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013747/pdf/ijerph-17-00672.pdf>;
Scott Griffiths *et al.*, *The Contribution of Social Media to Body Dissatisfaction, Eating Disorder*
Symptoms, and Anabolic Steroid Use Among Sexual Minority Men, 21 *Cyberpsychology, Behav., &*
Soc. Networking 149–156, 149 (2018),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/pdf/cyber.2017.0375.pdf>.

⁷¹ Jing Yang *et al.*, *Selfie-Viewing and Facial Dissatisfaction among Emerging Adults: A Moderated*
Mediation Model of Appearance Comparisons and Self-Objectification at 5–6, 17 *Int'l J. Env't Rsch.*
(footnote continued)

1 apps subconsciously implant the notion of imperfection and ugliness generating a loss of
2 confidence[.]”⁷²

3 92. In another recent study, even users that report a higher initial level of self-esteem,
4 felt they looked 44% worse before their image was edited using a filter. When a filter increases a
5 gap between how individuals want to look and how they feel they actually look, it “reduce[s] their
6 self-compassion and tolerance for their own physical flaws.”⁷³

7 93. In a recent article, clinical psychologists predicted social media addiction will
8 become a formal diagnosis, with many of the same effects as substance abuse.⁷⁴ The negative
9 impacts of excessive and addictive social media use are especially harmful to youth and interfere
10 with development of healthy coping strategies, social skills, and emotional regulation.⁷⁵ To treat
11 social media addiction, clinical psychologists recommend strategies used in substance abuse
12 treatment, including detox, full-stop periods, reducing access, and identifying triggers for the
13 addictive behavior.⁷⁶ The triggers for this addictive behavior include design features developed by
14 Defendants to increase use, such as “for you” recommendations, explore tabs or pages, and
15 stories.⁷⁷

16 94. Defendants’ platforms are highly addictive because Defendants intended them to be
17 so.

18 95. Defendants’ deliberate cultivation of the youth market for their platforms has

19 & Pub. Health 672 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013747/pdf/ijerph-17-00672.pdf>.

20 ⁷² Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn’t Be Ignored – Here’s Why*, InStyle (Sept. 14, 2022), <https://www.instyle.com/beauty/social-media-filters-mental-health>.

21 ⁷³ Ana Javornik *et al.*, *Research: How AR Filters Impact People’s Self-Image*, Harv. Bus. Rev. (Dec. 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

22 ⁷⁴ Melissa Rudy, *Excessive social media use has many of the same effects as substance abuse, says expert*, FoxNews (Aug. 15, 2023), <https://www.foxnews.com/health/excessive-social-media-use-same-effects-substance-abuse-expert>.

23 ⁷⁵ *Id.*

24 ⁷⁶ *Id.*

25 ⁷⁷ *Id.*

1 foreseeably resulted in an increased risk of a variety of harms for today’s youth, including, but not
2 limited to, social media addiction, withdrawal (from friends, family, and social and academic
3 advancement), lack of focus, anxiety, body dysmorphia, eating disorders, depression,
4 radicalization, difficulty sleeping (e.g., later sleep and wake times on school days and trouble
5 falling back asleep after nighttime awakening), self-harm, and other risk-taking behaviors.

6 **3. Defendants designed, developed, produced, operated, promoted, distributed, and**
7 **marketed their platforms to attract, capture, and addict youth, with minimal**
8 **parental oversight.**

9 96. NYC Plaintiffs seek to hold Defendants accountable for designing their platforms
10 with algorithms that wield user data as a weapon against children and fuel the addiction machine.

11 97. All of Defendants’ platforms operate based on sophisticated algorithms. These
12 algorithms serve different purposes within the platforms. Data-gathering algorithms are a design
13 feature that causes harm to children by collecting volumes of user data that it can feed to content
14 algorithms and fuel addiction.

15 98. By measuring and exploiting every aspect of content-agnostic user interaction with
16 their platforms—from click patterns to location to social networks⁷⁸—the Defendants’ algorithms
17 and recommendation systems are optimized to maximize the amount of time users spend on
18 Defendants’ platforms without consideration for actual information being served.⁷⁹

19 99. This automated attention farming weaponizes user interaction to fuel Defendants’
20 addiction engines.⁸⁰

21 100. Crucially, these aspects of Defendants’ systems do not consider the substantive
22 information conveyed by the posts.

23 101. Meta, for example, explains that “[w]e combine predictions of different events using
24 an arithmetic formula, called value model, to capture the prominence of different signals in terms
25 of deciding whether the content is relevant. We use a weighted sum of predictions such as [w_like

26 ⁷⁸ MC ¶¶ 250, 265, 509, 585-91, 747-49.

27 ⁷⁹ See *id.* ¶¶ 250, 509, 585-91, 747-749.

28 ⁸⁰ See *id.* ¶ 755.

1 * P(Like) + w_save * P(Save) - w_negative_action * P(Negative Action)]. If, for instance, we
2 think the importance of a person saving a post on Explore is higher than their liking a post, then
3 the weight for the save action should be higher.”⁸¹ At no point does this process examine the
4 information conveyed by the content.

5 102. The following is a subset of the reams of content-agnostic user interaction data that
6 Defendants collect—tracking users’ actions without considering the substantive information that
7 is the object of the interactions:⁸²

- 8 a. a user’s demographics;⁸³
- 9 b. what posts a user clicks on;⁸⁴
- 10 c. how long a user reads or watches a post;⁸⁵
- 11 d. which posts a user hovers their mouse over—and for how long they do so;⁸⁶
- 12 e. which posts users don’t engage with—i.e., which posts fail to draw attention or
13 engagement;⁸⁷
- 14 f. what times of day users access the product;⁸⁸
- 15 g. physical location where users access the product;⁸⁹
- 16 h. devices connected to the Wi-Fi networks a user connects through;⁹⁰
- 17 i. length of a video;
- 18 j. time spent viewing a video;

19
20 ⁸¹ *Powered by AI: Instagram’s Explore recommender system*, Meta (Nov. 25, 2019),
21 <https://ai.meta.com/blog/powered-by-ai-instances-explore-recommender-system/>.

22 ⁸² Discovery is likely to reveal Defendants’ use of other content agnostic interaction data.

23 ⁸³ *See id.* ¶ 250-52, 747.

24 ⁸⁴ *See id.* ¶¶ 207, 242, 589-91, 747.

25 ⁸⁵ *See id.* ¶¶ 242, 589-91, 747.

26 ⁸⁶ *See id.* ¶ 250.

27 ⁸⁷ *See id.* ¶ 250, 509, 589-91, 747.

28 ⁸⁸ *See id.* ¶ 242.

⁸⁹ *See id.* ¶¶ 242, 252, 509, 289; 656, 711.

⁹⁰ *See id.* ¶¶ 242, 711.

- 1 k. users' connections to other users;
- 2 l. the number of users that viewed a particular post;
- 3 m. the number of "shares";
- 4 n. the number of "saves"; and,
- 5 o. the number of "likes."

6 103. Armed with this content-agnostic user interaction data, Defendants' machine
7 learning systems maximize user attention to their platforms, untethered from any consideration of
8 what that attention is being directed to.

9 104. These systems work not on the basis of mechanical, constant rules, but through
10 complex, dynamic mathematical systems that examine data about users' interactions with pieces
11 of content—but not the content itself—to predict how the content is likely to affect a specific
12 users' engagement by showing them only information that is likely to achieve the endpoint that
13 Defendants set: maximizing the time users spend on the platform.

14 105. These data-gathering algorithms feed information into Defendants' recommendation
15 systems, essentially acting as their fuel. To Defendants' recommendation systems, user posts are
16 data points on a graph, nodes in a vast web of meticulously catalogued interactions, rather than
17 messages being shared.

18 106. Defendants' recommendation systems do not consider the actual information
19 conveyed in a post, but instead the probability that a user is, or is not, maximally engaged on the
20 platform.

21 107. Perversely, Defendants' paramount focus on holding users' attention above all else
22 frequently results in users being *denied* the content they are actually interested in.

23 108. To condition users to keep scrolling, swiping, and refreshing, Defendants' platforms
24 will hold back rewards that might result in them closing out the platform once viewed.

25 109. The fact that Defendants' content-agnostic recommendation algorithms are neither
26 designed to curate the actual information that is disseminated, nor to give users information that
27 they want, is unsurprising given the truth of their business models. Defendants are not in the
28

1 business of fostering human connection or helping people further their knowledge. Defendants
2 sell ads. For them to profit, it doesn't matter what their users are looking at, only that they are
3 looking—offering up a captive audience that can be carved up and sold to whichever advertiser is
4 the highest bidder.

5 110. While not identical, all of the Defendants' platforms operate—and harm users—in
6 similar ways. Instagram, Facebook, TikTok, Snapchat, and YouTube employ many similar
7 features that are engineered to induce more use by young people—creating an unreasonable risk of
8 compulsive use and addiction.⁹¹ For instance, all five platforms harvest user data and use this
9 information to generate and push algorithmically tailored “feeds” of photos and videos. And all
10 five include methods through which approval can be expressed and received, such as likes, hearts,
11 comments, shares, or reposts. This section explains the psychological and social mechanisms
12 exploited by these design choices, creating an unreasonable risk of compulsive use and addiction.

13 111. Far from avoiding this risk, Defendants ran toward it, knowing that child addiction to
14 their platforms would drive their revenue. For example, an internal presentation: *2017 Teens*
15 *Strategic Focus*, explicitly stated Meta's “goal: retain [Monthly Active People] and [Daily Active
16 People], [and] grow teen time spent” by “rebuild[ing] social Facebook to work better for teens,
17 including entertainment.”⁹² Similarly, an internal Meta planning document from November 2018
18 stated, “[w]inning schools is the way to win with teens because an individual teen's engagement is
19 highly correlated with school [Monthly Active People] penetration.”⁹³ “Solving jobs related to
20

21 ⁹¹ See Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*,
22 Gizmodo (Aug. 16, 2022), <https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419> (“Over the last decade, some of the most popular social media apps have blatantly
23 ripped off features from some of the other most popular social media apps, in a tech version of
24 Capture the Flag where the only losers are the users who are forced to persist through this cat-and-
25 mouse game.”); see also “*How Social Media Work*,” Chapter 2 in *Social Media and Adolescent*
Health at 46 *et seq.*, Nat'l Acads. Press (2023), <https://nap.nationalacademies.org/read/27396/chapter/4>
(prepublication copy).

26 ⁹² Complaint for Injunctive and Other Relief (“MDL AG Compl.”) at 27, ¶ 146, *State of Ariz. v.*
27 *Meta Platforms, Inc.*, No. 4:23-cv-005448-YGR (N.D. Cal. Nov. 22, 2023), ECF No. 73-2.

28 ⁹³ MDL AG Compl. at 27, ¶ 147.

1 school and building school network effects is a way to increase overall teen usage.”⁹⁴

2 112. Defendants employed the design features described herein to maximize youth use,
3 knowing the impact it would have on youth and communities like NYC Plaintiffs’ community.

4 113. Defendants failed to provide features such as robust age verification, effective
5 parental controls, and effective parental notifications. The lack of these features harmed NYC
6 Plaintiffs by contributing to the social media addiction epidemic among the children in their
7 schools and communities and by introducing or exponentially increasing the harm of other
8 addictive design features and the corresponding cost of fighting the youth mental health crisis.

9 114. Defendants’ design features failed to reasonably protect child users by failing to:
10 place default limits on the length and frequency of user sessions; utilize opt-in restrictions as
11 opposed to opt-out restrictions on the length and frequency of sessions; provide self-limiting tools;
12 provide blocks to use at certain times of day for minor users such as during school hours; and
13 provide a deactivation and deletion process free from unnecessary barriers.

14 115. Defendants caused harm to NYC Plaintiffs by utilizing addictive design features that
15 weaponized user data and preyed on adolescent minds such as: endless scroll on users’ feeds;
16 algorithms that paired intermittent variable rewards (“IVR”) to user specific data; strategically
17 timing and clustering notifications to lure users back to Defendants’ platforms; and otherwise
18 sending psychologically manipulative notifications and communications to keep minors hooked.

19 116. Defendants knowingly implemented filters that promote negative social comparison.
20 These filters—especially without any demarkation that a filter is in place—both fuel children’s
21 addiction to Defendants’ platforms and heighten the mental health toll on children in NYC
22 Plaintiffs’ schools and communities and the burden on NYC Plaintiffs.

23 117. All of these features worked together and individually to addict young users to social
24 media and to create the youth mental health crisis NYC Plaintiffs are fighting today.

25 118. Defendants’ platforms are designed and engineered to methodically, but
26 unpredictably, space out dopamine-triggering rewards with dopamine gaps. Unpredictability is

27 ⁹⁴ *Id.*

1 key because, paradoxically, IVR create stronger associations (conditioned changes in the neural
2 pathway) than fixed rewards. Platforms that use this technique are highly addictive or habit
3 forming. IVR is based on insights from behavioral science dating back to research in the 1950s by
4 Harvard psychologist B. F. Skinner. Skinner found that laboratory mice respond most voraciously
5 to unpredictable rewards. In one famous experiment, mice that pushed a lever received a variable
6 reward (a small treat, a large treat, or no treat at all). Compared with mice who received the same
7 treat every time, the mice who received only occasional rewards were more likely to exhibit
8 addictive behaviors such as pressing the lever compulsively. This exploitation of neural circuitry
9 is exactly how addictive platforms like slot machines keep users coming back.

10 119. Slot machines are a pertinent example of how IVR works in an addictive product to
11 keep users coming back.⁹⁵ Users pull a lever to win a prize and with each pull, the user may or
12 may not win a prize (i.e., an intermittent reward that varies in value).

13 120. The IVR aspect of slot machines is limited by the fact that they deliver rewards in a
14 randomized manner, irrespective of the person pulling the lever. By contrast, Defendants'
15 platforms are designed to purposely withhold and release rewards on a schedule its algorithms
16 have determined is optimal to heighten a specific user's craving and keep them using the platform.
17 Defendants incorporate IVR into the design and operations of their respective platforms in various
18 ways by "link[ing] a user's action (like pulling a lever) with a variable reward."⁹⁶ For example,
19 when "we swipe down our finger to scroll the Instagram feed, we're playing a slot machine to see
20 what photo comes next."⁹⁷ Meta also delays the time it takes to load the feed. "This is because
21 without that three-second delay, Instagram wouldn't feel variable."⁹⁸ Meta also times and clusters

22
23 ⁹⁵ See, e.g., Julian Morgans, *The Secret Ways Social Media Is Built for Addiction*, Vice (May 17,
2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

24 ⁹⁶ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016),
25 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

26 ⁹⁷ *Id.*

27 ⁹⁸ Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
28 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

1 notifications to delay gratifications and thereby build user anticipation. Without that delay, there
2 would be no time for users’ anticipation and craving to build. In slot machine terms, there would
3 be “no sense of *will I win?* because you’d know instantly. So the delay isn’t the app loading. It’s
4 the cogs spinning on the slot machine.”⁹⁹

5 121. Former Google CEO Schmidt and psychologist Haidt also compared the
6 manipulative design of social media platforms to a slot machine: “[T]hink of a slot machine, a
7 contraption that employs dozens of psychological tricks to maximize its addictive power. Next,
8 imagine . . . if they could create a new slot machine for each person, tailored in its visuals,
9 soundtrack, and payout matrices to that person’s interests and weaknesses. That’s essentially what
10 social media *already* does, using algorithms and AI[.]”¹⁰⁰

11 122. As further described below, each of Defendants’ platforms exploits this
12 psychological reaction among its users, typically using “Likes,” “Hearts,” or other forms of
13 approval that serve as the reward and are purposefully delivered in a way to create stronger
14 associations and maximize addiction. Instagram’s notification algorithm will at times determine
15 that a particular user’s engagement will be maximized if the app withholds “Likes” on their posts
16 and then later delivers them in a large burst of notifications.

17 123. Defendants’ use of IVR is particularly effective and dangerous for adolescents, given
18 that their brains have not completely matured and the tools that would allow them to moderate
19 their use of Defendants’ platforms—impulse control and executive function—are still under
20 development.

21 124. Defendants also manipulate young users through their exploitation of
22 “reciprocity”—the psychological phenomenon by which people respond to positive or hostile
23 actions in kind. Reciprocity means that people respond in a friendly manner to friendly actions,
24

25 ⁹⁹ *Id.*

26 ¹⁰⁰ Jonathan Haidt & Eric Schmidt, *AI Is About to Make Social Media (Much) More Toxic*, Atl. (May
27 5, 2023), <https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/> [<https://perma.cc/7WCA-RWHR>].

1 and with negative retaliation to hostile actions.¹⁰¹ In the 1970s, sociologists Phillip Kunz and
2 Michael Woolcott famously illustrated the powerful effect of reciprocity through an experiment
3 using holiday cards. They sent cards to a group of complete strangers, and included a return
4 address indicating that they were from either “Dr. and Mrs. Kunz” or “Joyce and Phil.”¹⁰² People
5 whom Kunz had never met before reciprocated, flooding him with holiday cards in return, some
6 even including hand-written notes and pictures of their families.¹⁰³ Most of the responses did not
7 even ask who “Dr. Kunz” was—they simply responded to his initial gesture with a reciprocal
8 action.¹⁰⁴

9 125. Platforms such as Instagram and Snapchat exploit reciprocity by, for example,
10 automatically telling the sender when their message is seen, instead of letting the recipient avoid
11 disclosing whether it was viewed. Consequently, the recipient feels more obligated to respond
12 immediately, keeping users on the product.¹⁰⁵ Similarly, alerts and notifications of delivered
13 messages or comments compel the recipient to return to the product to respond.

14 126. Defendants’ platforms and design features also addict young users by preying on
15 their already heightened need for social comparison and interpersonal feedback-seeking.¹⁰⁶
16 Because of their developmental stage, adolescents are primed to focus on social status, social
17

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19 ¹⁰¹ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J.
Econ. Persps. 159–181, 159 (2000), <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.14.3.159>.

20 ¹⁰² Phillip R. Kunz & Michael Woolcott, *Season’s greetings: From my status to yours*, 5(3) Soc. Sci.
Rsch. 269–278, 270–271 (1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X)
21 [<https://perma.cc/5KLP-MC34>].

22 ¹⁰³ *Id.*

23 ¹⁰⁴ *Id.*

24 ¹⁰⁵ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
<https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

25
26 ¹⁰⁶ Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and*
Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms at 4,
27 43 J. Abnormal Child Psych. 1427–1438 (2015),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/pdf/nihms948986.pdf>.

1 comparisons, and a desire for social validation.¹⁰⁷ Defendants’ platforms encourage repetitive
2 usage by dramatically amplifying those insecurities.

3 127. Professor Prinstein has explained that online and real-world interactions are
4 fundamentally different.¹⁰⁸ For example, in the real world, no public ledger tallies the number of
5 consecutive days friends speak. Similarly, “[a]fter you walk away from a regular conversation,
6 you don’t know if the other person liked it, or if anyone else liked it[.]”¹⁰⁹ By contrast, a design
7 like the “Snap Streak” creates exactly such artificial forms of feedback.¹¹⁰ On Defendants’
8 platforms, friends and even complete strangers can publicly deliver (or withhold) dopamine-laced
9 likes, comments, views, and follows.¹¹¹

10 128. The “Like” feature common to Defendants’ platforms has an especially powerful
11 effect on teenagers and can neurologically alter their perception of online posts. Researchers at
12 UCLA used magnetic resonance imaging to study the brains of teenagers as they used a program
13 simulating Instagram. They found that the teens’ perceptions of a photo changed depending on the
14 number of likes it had generated.¹¹² That an image was highly liked—regardless of its content—
15 instinctively caused the girls to prefer it. As the researchers put it, teens react to perceived
16

17
18 ¹⁰⁷ Susan Harter, *The construction of the self: developmental and sociocultural foundations* (2d. ed.
19 Guilford Press 2012) (explaining how, as adolescents move toward developing cohesive self-
20 identities, they typically engage in greater levels of social comparison and interpersonal feedback-
21 seeking).

22 ¹⁰⁸ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
23 (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

24 ¹⁰⁹ *Id.*

25 ¹¹⁰ A “Snap Streak” is designed to measure a user’s Snapchat activity with another user. Two users
26 achieve a “Snap Streak” when they exchange at least one Snap in three consecutive 24-hour periods.
27 When successively longer “Streaks” are achieved, users are rewarded with varying tiers of emojis.

28 ¹¹¹ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

¹¹² Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on
Neural and Behavioral Responses to Social Media*, 27(7) Ass’n Psych. Sci. 1027–1035, 1027
(2016),
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf.

1 “endorsements,” regardless of whether they know the source.¹¹³

2 129. Other features of Defendants’ platforms also amplify the heightened awareness of
3 status and appearance that is part of adolescence. Built into Defendants’ platforms are appearance-
4 altering filters, which underscore conventional (and often racially biased) standards of beauty, by
5 allowing users to remove blemishes, make bodies and faces appear thinner, and lighten skin tone.
6 Those features contribute to a harmful body image among adolescents, who begin to negatively
7 perceive their own appearance and believe their bodies, and indeed their lives, to be comparatively
8 worse.¹¹⁴

9 130. Defendants’ respective product features work in combination to create and maintain
10 a user’s “flow-like state”: a hyper-focused, hypnotic state, where bodily movements are reflexive,
11 and the user is totally immersed in smoothly rotating through aspects of the social media
12 product.¹¹⁵ This experience of “flow,” as psychologists describe it, “fully immerse[s]” users,
13 distorts their perception of time, and is associated with excessive use of social media sites.¹¹⁶

14 131. As discussed in more detail below, features like the ones just described can cause or
15 contribute to the following injuries in, or effects on, young people: eating and feeding disorders;
16 depressive disorders; anxiety disorders; sleep disorders; trauma- and stressor-related disorders;
17 obsessive-compulsive and related disorders; disruptive, impulse-control, and conduct disorders;

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19 ¹¹³ *Id.*

20 ¹¹⁴ *Id.*; see also Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a*
21 *moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3,
22 10 *BMC Psychiatry* 279 (2022),
23 <https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf>
(explaining that youth are particularly vulnerable because they “use social networking sites for
24 construing their identity, developing a sense of belonging, and for comparison with others”).

25 ¹¹⁵ See, e.g., Sophia Petrillo, *What Makes TikTok so Addictive?: An Analysis of the Mechanisms*
26 *Underlying the World’s Latest Social Media Craze*, *Brown Undergraduate J. Pub. Health* (Dec. 13,
27 2021), <https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/> (describing how IVR and
28 infinite scrolling may induce a flow-like state in users).

26 ¹¹⁶ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation*
27 *model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 *BMC Psychiatry*
28 279 (2022), <https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf>.

1 radicalization; suicidal ideation; self-harm; and suicide.¹¹⁷

2 132. As a result, NYC Plaintiffs have been forced to expend significant resources
3 addressing these harms and providing education and support to students, staff, parents, and NYC
4 Plaintiffs' community.

5 **4. Millions of kids use Defendants' platforms compulsively, including during the**
6 **school day.**

7 133. Defendants have been staggeringly successful in their efforts to attract young users
8 to their platforms. In 2021, 32% of 7- to 9-year-olds,¹¹⁸ 49% of 10- to 12-year-olds,¹¹⁹ and 90% of
9 13- to 17-year-olds in the United States have used social media.¹²⁰ A majority of U.S. teens use
10 Instagram, TikTok, Snapchat, and/or YouTube. Thirty-two percent say they "wouldn't want to
11 live without" YouTube, while 20% said the same about Snapchat, and 13% said the same about
12 both TikTok and Instagram.¹²¹

13 134. U.S. teenagers who use Defendants' platforms are likely to use them every day.
14 Sixty-two percent of U.S. children ages 13–18 use social media daily.¹²² And daily use often
15 means constant use. About one-in-five U.S. teens visit or use YouTube "almost constantly," while
16 about one-in-six report comparable usage of Instagram.¹²³ Nearly half of U.S. teens use TikTok at
17

18 ¹¹⁷ *See, e.g., id.*

19 ¹¹⁸ C.S. Mott Child.'s Hosp. Univ. Mich. Health, *Sharing Too Soon? Children and Social Media*
20 *Apps*, 39(4) Mott Poll Report (Oct. 18, 2021),
21 https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf.

22 ¹¹⁹ *Id.*

23 ¹²⁰ *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018),
https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

24 ¹²¹ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31,
25 Common Sense Media (2022), https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

26 ¹²² *Id.*

27 ¹²³ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
28 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

1 least “several times a day.”¹²⁴ TikTok’s internal data shows that children aged 13–17 check the
2 platform nearly 17 times a day and spend, on average, almost two hours a day on TikTok, out
3 pacing all older age groups.¹²⁵ Many children are spending four or more hours on TikTok every
4 day.¹²⁶ In one study, U.S. teenage users reported checking Snapchat thirty times a day on
5 average.¹²⁷

6 135. Many teenagers know they are addicted to Defendants’ platforms: 36% admit they
7 spend too much time on social media.¹²⁸ Yet they cannot stop. Of the teens who use at least one
8 social media product “almost constantly,” 71% say quitting would be hard. Nearly one-third of
9 this population—and nearly one-in-five of all teens—say quitting would be “very hard.”¹²⁹

10 136. Notably, the more teens use Defendants’ platforms, the harder it is to quit. Teens
11 who say they spend too much time on social media are almost twice as likely to say that giving up
12 social media would be hard, compared to teens who see their social media usage as about right.¹³⁰

13 137. Despite using social media frequently, most young people don’t particularly enjoy it.
14 In 2021, only 27% of boys and 42% of girls ages 8–18 reported liking social media “a lot.”¹³¹
15 Moreover, one survey found that young people think social media is the main reason youth mental

16 ¹²⁴ *Id.*

17 ¹²⁵ Complaint for Violations of the Consumer Sales Practices Act (“Utah AG Compl.”) at 3, ¶ 5,
18 *Utah Div. of Consumer Prot. of the State of Utah v. TikTok Inc.*, (Utah Jud. Dist. Ct. Cnty. Salt
19 Lake), ECF No. 1.

20 ¹²⁶ *Id.*

21 ¹²⁷ Erinn Murphy *et al.*, Piper Sandler, *Fall 2021: Taking Stock with Teens: 21 Years of Researching*
22 *U.S. Teens* (Oct. 5, 2021) at 13, <https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcdb1d4.pdf>; *see also* Press Release, Piper Sandler, *Piper Sandler Completes 42nd Semi-Annual Generation Z Survey of 10,000 U.S. Teens* (Oct. 5, 2021), <https://www.pipersandler.com/news/piper-sandler-completes-42nd-semi-annual-generation-z-survey-10000-us-teens>.

23 ¹²⁸ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
24 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

25 ¹²⁹ *Id.*

26 ¹³⁰ *Id.*

27 ¹³¹ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 34,
28 Common Sense Media (2022), https://www.common Sense Media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

1 health is getting worse.¹³² About twice as many of the surveyed youth believed that social media is
2 the main reason for declining mental health than the next likely cause, and over seven times more
3 believed it to be the main cause rather than drugs and alcohol.¹³³

4 138. The most recent data shows these trends persist. According to a 2023 report, 45% of
5 teen girls who use TikTok say they feel addicted to it or use it more than intended at least
6 weekly.¹³⁴ Similarly, 37% of teen girls said they felt addicted to Snapchat, 34% said they felt
7 addicted to YouTube, and 33% said they felt addicted to Instagram.¹³⁵ Notably, teenage girls
8 reported higher rates of feeling addicted to these social media platforms than messaging apps.¹³⁶

9 139. Defendants have also deliberately designed their platforms to encourage the
10 compulsive use of their platforms during the school day. Indeed, a recent study performed by
11 Common Sense Media and the C.S. Mott Children’s Hospital confirms the ubiquity and intensity
12 of notifications in a young person’s life.¹³⁷ The research found that young users “received a
13 median of 237 notifications” in a “typical day,” and that “[n]otification frequency varied widely,
14 with maximums of over 4,500 delivered and over 1,200 seen” and nearly “a quarter of [those]
15 notifications arrived during school hours[.]”¹³⁸

16 140. When youth are able to stop or limit their social media use, it is often because of the
17 negative impacts they experienced using social media. In one sample, 38% of adolescent social
18 media users reported that “they had ... stopped using a platform or limited how much they use it

19 ¹³² Colmar Brunton, headspace Nat’l Youth Mental Health Found., *headspace National Youth*
20 *Mental Health Survey 2018* at 51, [https://headspace.org.au/assets/headspace-National-Youth-](https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-Survey-2018.pdf)
Mental-Health-Survey-2018.pdf.

21 ¹³³ *Id.*

22 ¹³⁴ Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media* at 6,
23 Common Sense Media (2023), [https://www.commonsensemedia.org/sites/default/files/](https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf)
research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf.

24 ¹³⁵ *Id.*

25 ¹³⁶ *Id.*

26 ¹³⁷ Jenny S. Radesky *et al.*, *Constant Companion: A Week in the Life of a Young Person’s*
27 *Smartphone Use*, Common Sense Media (2023), [https://www.commonsensemedia.org/sites/](https://www.commonsensemedia.org/sites/default/files/research/report/2023-cs-smartphone-research-report_final-for-web.pdf)
default/files/research/report/2023-cs-smartphone-research-report_final-for-web.pdf.

28 ¹³⁸ *Id.* at 6.

1 because they felt it had a negative impact on them.”¹³⁹ Indeed, many teenage girls reported feeling
2 they were spending too much time on social media or that it was getting in the way of other
3 activities; 43% of teenage girls described these feelings in relation to YouTube, 23% said the
4 same of TikTok, 23% said the same of Instagram, and 10% said the same of Snapchat.¹⁴⁰

5 **5. Defendants’ platforms have created a youth mental health crisis.**

6 141. Nearly a decade of scientific and medical studies demonstrate that dangerous
7 features engineered into Defendants’ platforms—particularly when used multiple hours a day—
8 can have a “detrimental effect on the psychological health of [their] users,” including compulsive
9 use, addiction, body dissatisfaction, anxiety, depression, and self-harming behaviors such as
10 eating disorders.¹⁴¹

11 142. Defendants’ platforms employ features that are designed for ease of access, rewards
12 and reinforcement, gamification, escapism, and lack of regulation.¹⁴² These features cause online
13 social media experiences to become addictive such that adolescents experience depression,
14 anxiety, loneliness, and lower self-esteem and life satisfaction.¹⁴³

15 143. Addiction and compulsive use of Defendants’ platforms can entail a variety of
16 behavioral problems, including but not limited to: (1) a lessening of control; (2) persistent,
17 compulsive seeking out of access to the platform; (3) using the platform more, and for longer, than
18 intended; (4) trying to cut down on use but being unable to do so; (5) experiencing intense
19 cravings or urges to use the platform; (6) tolerance (needing more of the platform to achieve the

20 ¹³⁹ *Id.* at 27.

21 ¹⁴⁰ *Id.*

22 ¹⁴¹ See, e.g., Fazida Karim *et al.*, *Social Media Use and Its Connection to Mental Health: A Systemic*
Review at 7, 12(6) *Cureus*, June 15, 2020,
23 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/pdf/cureus-0012-00000008627.pdf>;
Alexandra R. Lonergan *et al.*, *Protect me from my selfie: Examining the association between photo-*
24 *based social media behaviors and self-reported eating disorders in adolescence*, 53 *Int’l J. Eating*
25 *Disorders* 755–766 (2020), <https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256>
[<https://perma.cc/L9TN-SZKP>].

26 ¹⁴² Puruesh Chaudhary, *A Slow Scroll Into Addiction*, *Aurora Dawn* (Sept. 4, 2023),
27 <https://aurora.dawn.com/news/1144883>.

28 ¹⁴³ *Id.*

1 same desired effect); (7) developing withdrawal symptoms when not using the platform, or when
2 the platform is taken away; (8) neglecting responsibilities at home, work, or school because of the
3 intensity of usage; (9) continuing to use the platform even when doing so interferes and causes
4 problems with important family and social relationships; (10) giving up important or desirable
5 social and recreational activities due to use; and (11) continuing to use despite the platform
6 causing significant harm to the user’s physical and mental health.

7 144. Each Defendant has long been aware of research connecting use of their apps with
8 harm to its users’ wellbeing, but chose to ignore or brush it off.¹⁴⁴ For example, in 2018, a Meta
9 employee mocked it as “BS . . . psedu [sic] science,” and “a bunch of people trying to get air
10 time.”¹⁴⁵ Yet, as discussed at length below, Defendants conducted some of the research
11 themselves—and then hid their unfavorable findings from the public.¹⁴⁶

12 145. Scientists have studied the impacts of the overuse of social media since at least 2008,
13 with social media addiction recognized in literature around that time after a pervasive upsurge in
14 Facebook use.¹⁴⁷ The Bergen Social Media Addiction Scale assesses social media addiction along
15 six core elements: (1) salience (preoccupation with the activity); (2) mood modification (the
16

17 ¹⁴⁴ In August 2019, a social psychologist, and leading expert on the effects that technology devices
18 have on the mental health of their users, wrote to Mr. Zuckerberg ahead of a meeting to note that a
19 new study “point[ed] heavily to a connection, not just from correlational studies but from true
20 experiments, which strongly indicate[d] causation, not just correlation” between Meta’s platforms
21 and harms to users’ wellbeing. META3047MDL-003-00089107 at META3047MDL-003-00089108.
22 In some cases, Meta was not only aware of research connecting its platforms to detrimental effects
23 but actively sought to undermine that research. *See* META3047MDL-003-00082165 at
24 META3047MDL-003-00082165–META3047MDL-003-00082166 (discussing methods to
25 undermine research on addiction to apps).

26 ¹⁴⁵ META3047MDL-003-00082165 at META3047MDL-003-00082165.

27 ¹⁴⁶ *See, e.g.*, Haugen_00016373 at Haugen_00016381 (“The best external research indicates that
28 Facebook’s impact on people’s well-being is negative.”); *Id.* at Haugen_00016414 (March 9, 2020
presentation: *All problematic users were experiencing multiple life impacts*, including loss of
productivity, sleep disruption, relationship impacts, and safety risks.); Haugen_00005458 at
Haugen_00005500 (November 5, 2019 presentation containing a slide: *But, We Make Body Image
Issues Worse for 1 in 3 Teen Girls*).

¹⁴⁷ Daniele La Barbera *et al.*, *Social network and addiction*, Interactive Media Inst. & IOS Press
(2009), <https://pubmed.ncbi.nlm.nih.gov/19592725/> [<https://perma.cc/WB99-CGTK>].

1 behavior alters the emotional state); (3) tolerance (increasing activity is needed for the same
2 mood-altering effects); (4) withdrawal (physical or psychological discomfort when the behavior is
3 discontinued); (5) conflict (ceasing other activities or social interaction to perform the behavior);
4 and 6) relapse (resuming the behavior after attempting to control or discontinue it).¹⁴⁸

5 146. Social media addiction is more prevalent among younger age groups.¹⁴⁹ Researchers
6 note that such “high prevalence in adolescence unveils the need to allocate more public resources
7 on mental health services to prevent or treat social media addiction in this high-risk group.”¹⁵⁰

8 147. Beginning in at least 2014, researchers began demonstrating that addictive and
9 compulsive use of Defendants’ platforms leads to negative mental and physical outcomes for kids.

10 148. Subsequent literature has shown that social media addiction causes a wide range of
11 negative effects. These negative effects generally fall into four categories, as further discussed
12 below: (1) emotional; (2) relational; (3) health related; and (4) performance problems.¹⁵¹

13 149. In 2014, a study of 10- to 12-year-old girls found that increased use of Facebook was
14 linked with body image concerns, the idealization of thinness, and increased dieting.¹⁵² This study

16 ¹⁴⁸ Cecilie S. Andreassen *et al.*, *The relationship between addictive use of social media and video*
17 *games and symptoms of psychiatric disorders: A large-scale cross-sectional study*, 30(2) *Am. Psych.*
18 *Ass’n* 252–262 (2016), <http://dx.doi.org/10.1037/adb0000160>.

19 ¹⁴⁹ See Cecilia Cheng *et al.*, *Prevalence of social media addiction across 32 nations: Meta-analysis*
20 *with subgroup analysis of classification schemes and cultural values*, 117 *Addictive Behav.*, June
21 2021, at 5–6,
22 [https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdf?md5=80609bc4e3f2c4](https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf)
23 [51b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf](https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf); Lucia Monacis *et al.*, *Exploring*
24 *Individual Differences in Online Addictions: the Role of Identity and Attachment*, 15 *Int’l J. Mental*
25 *Health & Addiction* 853–868, 862 (2017),
26 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5529496/pdf/11469_2017_Article_9768.pdf.

27 ¹⁵⁰ Cecilia Cheng *et al.*, *Prevalence of social media addiction across 32 nations: Meta-analysis with*
28 *subgroup analysis of classification schemes and cultural values*, 117 *Addictive Behav.* (June 2021),
at 6, [https://www.sciencedirect.com/science/article/pii/S0306460321000307/](https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf)
[pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf](https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf)
[<https://tinyurl.com/364c2trt>].

¹⁵¹ Cecilie S. Andreassen, *Online Social Network Site Addiction: A Comprehensive Review*, 2
Current Addiction Rep. 175–184, 179 (2015), [https://link.springer.com/content/pdf/10.1007/s40429-](https://link.springer.com/content/pdf/10.1007/s40429-015-0056-9.pdf)
[015-0056-9.pdf](https://link.springer.com/content/pdf/10.1007/s40429-015-0056-9.pdf).

¹⁵² Marika Tiggemann & Amy Slater, *NetTweens: The Internet and Body Image Concerns in*
(footnote continued)

1 was sent to Mark Zuckerberg in 2018, in a letter signed by 118 public health advocates.¹⁵³

2 150. In 2016, a study demonstrated that young people who frequently use Defendants’
3 platforms are more likely to suffer sleep disturbances than their peers who use them
4 infrequently.¹⁵⁴ Defendants’ platforms, driven by IVR and fueled by data-gathering algorithms,
5 deprive users of sleep using a variety of design features that prompt children to re-engage with the
6 platforms when they should be sleeping. Disturbed and insufficient sleep is associated with poor
7 health outcomes,¹⁵⁵ including increased risk of major depression—by a factor of more than
8 three¹⁵⁶—and future suicidal behavior in adolescents.¹⁵⁷ The American Academy of Sleep
9 Medicine has recommended that, in a 24-hour period, children aged 6–12 years should regularly
10 sleep 9–12 hours and teenagers aged 13–18 years should sleep 8–10 hours.¹⁵⁸ Yet studies show
11 that young children are losing approximately one night’s worth of sleep every week, staying up to
12

13 *Preteenage Girls*, 34(5) *J. Early Adolescence* 606–620 (2014), <https://journals.sagepub.com/doi/epub/10.1177/0272431613501083> [<https://perma.cc/TSG5-RZAY>].

14 ¹⁵³ Letter from Campaign for a Commercial-Free Childhood to Mark Zuckerberg, CEO, Facebook,
15 Inc. (Jan. 30, 2018), <https://fairplayforkids.org/wp-content/uploads/archive/develop-generate/gaw/FBMessengerKids.pdf>.

16 ¹⁵⁴ Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance*
17 *among young adults*, 85 *Preventive Med.* 36–41 (2016),
18 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025> [<https://perma.cc/QYE5-92M4>].

19 ¹⁵⁵ *Id.*; *The Teen Brain: 7 Things to Know*, Nat’l Inst. Mental Health (2023),
20 <https://www.nimh.nih.gov/sites/default/files/documents/health/publications/the-teen-brain-7-things-to-know/teen-brain-7-things-to-know.pdf>; Joseph Campellone & Raymond K. Turley,
21 *Understanding the Teen Brain*, <https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=1&ContentID=3051>.

22 ¹⁵⁶ Robert E. Roberts & Hao T. Doung, *The Prospective Association between Sleep Deprivation and*
23 *Depression among Adolescents Sleep*, 37(2) *Sleep* 239–244, 242 (2014),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900610/pdf/aasm.37.2.239.pdf>.

24 ¹⁵⁷ Xianchen Liu & Daniel J. Buysse, *Sleep and youth suicidal behavior: a neglected field*, 19(3)
25 *Current Op. Psychiatry* 288–293, 291–292 (2006), <https://pubmed.ncbi.nlm.nih.gov/16612215/>
[<https://perma.cc/4UUP-Z6XX>].

26 ¹⁵⁸ Shalini Paruthi *et al.*, *Consensus Statement of the American Academy of Sleep Medicine on the*
27 *Recommended Amount of Sleep for Healthy Children: Methodology and Discussion*, 12 *J. Clinical*
28 *Sleep Med.* 1549–1561, 1549 (2016),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5078711/pdf/jcsm.12.11.1549.pdf>.

1 use social media or even waking themselves up in the middle of the night to check notifications,
2 driven by fear of missing out (“FOMO”).¹⁵⁹

3 151. High numbers of teens also self-report their experiences with the negative
4 consequences of extended social media use on their sleep. In a 2023 survey, 41% of teenage girls
5 who use TikTok said it interferes with their sleep at least weekly, with 24% saying it interferes
6 with their sleep daily.¹⁶⁰ Similarly, 28% of teenage girls who use YouTube said it interferes with
7 their sleep at least weekly; the same is true for 29% of teenage girls who use Instagram; and 31%
8 of teenage girls who use Snapchat.¹⁶¹

9 152. In another 2016 study, 52% of girls said they use image filters every day, and 80%
10 reported using an app to change their appearance before the age of 13.¹⁶² In fact, 77% of girls
11 reported trying to change or hide at least one part of their body before posting a photo of
12 themselves, and 50% believe they did not look good enough without photo editing.¹⁶³

13 153. In 2017, British researchers asked 1,500 teens to rate how Instagram, Snapchat, and
14 YouTube affected them on certain well-being measures, including anxiety, loneliness, body
15 image, and sleep.¹⁶⁴ Teens rated all three platforms as having a negative impact on body image,

16 ¹⁵⁹ Beatrice Nolan, *Kids are waking up in the night to check their notifications and are losing about*
17 *1 night’s worth of sleep a week, study suggests*, Bus. Insider (Sept. 19, 2022),
18 <https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9>.

19 ¹⁶⁰ Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media* at
20 26, Common Sense Media (2023), [https://www.commonsensemedia.org/sites/default/](https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf)
[files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf).

21 ¹⁶¹ *Id.*

22 ¹⁶² Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*
Changing The Way We See Ourselves, Forbes (Apr. 27, 2021),
23 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
[how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
24 [<https://perma.cc/Z8RQ-TC49>].

25 ¹⁶³ *Id.*

26 ¹⁶⁴ *#StatusOfMind*, Royal Soc’y Pub. Health (May 2017), [https://www.rsph.org.uk/static/](https://www.rsph.org.uk/static/uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf)
[uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf](https://www.rsph.org.uk/static/uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf); *see also* Jonathan Haidt, *The Dangerous*
Experiment on Teen Girls, Atl. (Nov. 21, 2021), [https://www.theatlantic.com/ideas/](https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/)
27 [archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/](https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/) [[https://perma.cc/5APH-](https://perma.cc/5APH-YA2Z)
[YA2Z](https://perma.cc/5APH-YA2Z)].
28

1 FOMO, and sleep. Teens also noted that Instagram and Snapchat had a negative impact on
2 anxiety, depression, and loneliness.

3 154. In 2018, a *Journal of Social and Clinical Psychology* study examined a group of
4 college students whose use of Instagram, Facebook, and Snapchat was limited to 10 minutes per
5 day per product. The study found that this limited-use group showed “significant reductions in
6 loneliness and depression over three weeks” compared to a control group that used social media as
7 usual.¹⁶⁵

8 155. Similarly, in another 2018 study of 40,000 children and adolescents ages 2–17,
9 children and adolescents who spent more time using screen media were “lower in psychological
10 well-being than low users.”¹⁶⁶ Further, users with high screen time were “significantly more likely
11 to display poor emotion regulation (not staying calm, arguing too much, being difficult to get
12 along with), an inability to finish tasks, lower curiosity, and more difficulty making friends.”¹⁶⁷
13 And among adolescents, high screentime users were twice as likely to receive a diagnosis of
14 depression or anxiety or need treatment for mental or behavioral health problems.¹⁶⁸

15 156. A 2019 survey of American adolescents ages 12–14 found that a user’s displeasure
16 with their body could be predicted based on their frequency of using social media (including
17 Instagram and Facebook) and based on the extent to which they engaged in behaviors that adopt
18 an observer’s point-of-view (such as taking selfies or asking others to “rate one’s looks”). This
19 effect was more pronounced among girls than boys.¹⁶⁹

21 ¹⁶⁵ Melissa G. Hunt *et al.*, *No More FOMO: Limiting Social Media Decreases Loneliness and*
22 *Depression*, 37 *J. Soc. & Clinical Psych.* 751–768, 751 (2018),
<https://guilfordjournals.com/doi/epdf/10.1521/jscp.2018.37.10.751> [<https://perma.cc/E2FL-3B34>].

23 ¹⁶⁶ Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower*
24 *psychological well-being among children and adolescents: Evidence from a population-based study*,
25 12 *Preventive Med. Reps.* 271–283, 279 (2018), [https://www.ncbi.nlm.nih.gov/pmc/
articles/PMC6214874/pdf/main.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/pdf/main.pdf).

26 ¹⁶⁷ *Id.*

27 ¹⁶⁸ *Id.*

28 ¹⁶⁹ Ilyssa Salomon & Christia Spears Brown, *The Selfie Generation: Examining the Relationship*
Between Social Media Use and Early Adolescent Body Image, 39 *J. Early Adolescence* 539–560
(footnote continued)

1 157. Another study in 2019 of more than 6,500 American adolescents ranging in age from
2 12–15 years old found that those who used social media for three hours or more per day were
3 more likely to suffer from mental health problems such as anxiety and depression.¹⁷⁰ Notably, this
4 association remained significant even after adjusting for demographics, past alcohol and
5 marijuana use, and history of mental health problems, mitigating the possibility of reverse
6 causality.¹⁷¹ This study also showed that “[a]dolescents who engage in high levels of social media
7 use may experience poorer quality sleep[.]”¹⁷² Further, the study noted “negative[] . . . body
8 image,” “anxiety” and “depression” as connected to social media use.¹⁷³

9 158. In 2020, a study of Australian adolescents found that investment in others’ selfies
10 (through likes and comments) was associated with greater odds of meeting criteria for
11 clinical/subclinical bulimia nervosa, clinical/subclinical binge-eating disorder, night eating
12 syndrome, and unspecified feeding and eating disorders.¹⁷⁴

13 159. In 2020, a longitudinal study investigated whether “Facebook Addiction Disorder”
14 predicted suicide-related outcomes and found that children and adolescents addicted to Facebook
15 are more likely to engage in self-injurious behavior, such as cutting and suicide.¹⁷⁵ Other studies

16 (2018), <https://journals.sagepub.com/doi/abs/10.1177/0272431618770809> [<https://perma.cc/U7FP-QDZR>].

17
18 ¹⁷⁰ Kira Riehm *et al.*, *Associations Between Time Spent Using Social Media and Internalizing and*
19 *Externalizing Problems Among US Youth*, 76(12) *JAMA Psychiatry* 1266–1273 (2019),
20 <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2749480> [<https://perma.cc/BCL7-6LXP>].

21 ¹⁷¹ *Id.*

22 ¹⁷² *Id.* at 1271.

23 ¹⁷³ *Id.*

24 ¹⁷⁴ Alexandra R. Lonergan *et al.*, *Protect me from my selfie: Examining the association between*
25 *photo-based social media behaviors and self-reported eating disorders in adolescence*, 53 *Int’l J.*
26 *Eating Disorders* 755–766 (2020), <https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256>
27 [<https://perma.cc/L9TN-SZKP>].

28 ¹⁷⁵ *See, e.g.*, Julia Brailovskaia *et al.*, *Positive Mental Health Mediates the Relationship Between*
Facebook Addiction Disorder and Suicide-Related Outcomes: A Longitudinal Approach, 23(5)
Cyberpsychology, Behav., & Soc. Networking 346–350 (2020),
<https://doi.org/10.1089/cyber.2019.0563> [<https://perma.cc/8RBV-QC6U>]. Jean M. Twenge *et al.*,
Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S.
(footnote continued)

1 examining the link between these increases found that adolescents who spent more time on screen
2 activities were significantly more likely to have high depressive symptoms or have at least one
3 suicide-related outcome, and that the highest levels of depressive symptoms were reported by
4 adolescents with high social media use and fewer in-person social interactions.¹⁷⁶

5 160. One of the primary reasons the use of social media is associated with depressive
6 symptoms among adolescents is because Defendants’ platforms encourage unhealthy social
7 comparison and feedback-seeking behaviors.¹⁷⁷ This causes youth to engage in negative
8 comparisons with their peers.¹⁷⁸ Specifically, adolescents are likely to engage in harmful upward
9 comparisons with others they perceive to be more popular.¹⁷⁹

10
11 *Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 *Clinical Psych. Sci.* 3–17
12 (2018), https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf (updated
13 Jean M. Twenge *et al.*, *Corrigendum: Increases in Depressive Symptoms, Suicide-Related*
14 *Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media*
15 *Screen Time*, 7 *Clinical Psych. Sci.* 397 (2019), [https://journals.sagepub.com/doi/epub/](https://journals.sagepub.com/doi/epub/10.1177/2167702618824060)
16 [10.1177/2167702618824060](https://journals.sagepub.com/doi/epub/10.1177/2167702618824060)).

17 ¹⁷⁶ Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and*
18 *Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6
19 *Clinical Psych. Sci.* 3–17 (2018), [https://courses.engr.illinois.edu/cs565/sp2018/](https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf)
20 [Live1_Depression&ScreenTime.pdf](https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf) (updated Jean M. Twenge *et al.*, *Corrigendum: Increases in*
21 *Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After*
22 *2010 and Links to Increased New Media Screen Time*, 7 *Clinical Psych. Sci.* 397 (2019),
23 <https://journals.sagepub.com/doi/epub/10.1177/2167702618824060>); *see also* Anthony Robinson *et*
24 *al.*, *Social comparisons, social media addiction, and social interaction: An examination of specific*
25 *social media behaviors related to major depressive disorder in a millennial population*, 24 *J.*
26 *Applied Biobehavioral Rsch.*, Jan. 8, 2019, <https://doi.org/10.1111/jabr.12158>
27 [<https://perma.cc/938C-SD59>].

28 ¹⁷⁷ Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and*
29 *Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms* at 4,
30 *J. Abnormal Child Psych.* 1427–1438 (2015), [https://www.ncbi.nlm.nih.gov/pmc/articles/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/pdf/nihms948986.pdf)
31 [PMC5985443/pdf/nihms948986.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/pdf/nihms948986.pdf).

32 ¹⁷⁸ *Id.*; *see also* Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a*
33 *moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3,
34 *BMC Psychiatry* 279 (2022), [https://bmcpyschology.biomedcentral.com/counter/pdf/](https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf)
35 [10.1186/s40359-022-00990-7.pdf](https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf) (explaining that youth are particularly vulnerable because they
36 “use social networking sites for construing their identity, developing a sense of belonging, and for
37 comparison with others”).

38 ¹⁷⁹ *Id.*

1 161. In 2020, clinical research demonstrated an observable link between youth social
2 media use and disordered eating behavior.¹⁸⁰ The more time young girls spend using Defendants’
3 platforms, the more likely they are to develop disordered eating behaviors.¹⁸¹ And the more social
4 media accounts adolescents have, the more disordered eating behaviors they exhibit.¹⁸²

5 162. Eating disorders often occur simultaneously with other self-harm behaviors such as
6 cutting and are often associated with suicide.¹⁸³

7 163. A 2022 study of Italian adolescent girls ages 13–17 and young women ages 18–28
8 found that Instagram’s image editing and browsing features, combined with an emphasis on
9 influencer interactions, promulgated unattainable body ideals that caused users to compare their
10 bodies to those ideals.¹⁸⁴ These trends were more prominent among adolescent girls, given their
11 higher susceptibility to social pressures related to their bodies and given the physical changes
12 associated with puberty.

13 164. In 2023, a study of magnetic resonance images demonstrated that compulsive use of
14 Defendants’ platforms measurably alters children’s brains.¹⁸⁵ This study measured fMRI
15 responses in 12-year-old adolescents who used Facebook, Instagram, and Snapchat over a three-
16 year period and found that neural patterns diverged. Specifically, those who engaged in high

17
18 ¹⁸⁰ Simon M. Wilksch *et al.*, *The relationship between social media use and disordered eating in*
19 *young adolescents*, 53 *Int’l J. Eating Disorders* 96–106, 101 (2020),
<https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23198>.

20 ¹⁸¹ *Id.* at 101–103.

21 ¹⁸² *Id.*

22 ¹⁸³ *See, e.g.*, Sonja A. Swanson *et al.*, *Prevalence and Correlates of Eating Disorders in Adolescents*,
23 68(7) *Archives Gen. Psychiatry* 714–723 (2011), [https://www.ncbi.nlm.nih.gov/pmc/articles/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546800/pdf/nihms886935.pdf)
<https://jamanetwork.com/journals/jamapediatrics/fullarticle/2801455> (correction *Errors in Figures*, 177 *JAMA Pediatrics* (2023),
<https://jamanetwork.com/journals/jamapediatrics/fullarticle/2801455>).

24 ¹⁸⁴ Federica Pedalino & Anne-Linda Camerini, *Instagram Use and Body Dissatisfaction: The*
25 *Mediating Role of Upward Social Comparison with Peers and Influencers among Young Females*,
19(3) *Int’l J. Env’t Rsch. & Pub. Health* 1543 (2022), <https://www.mdpi.com/1660-4601/19/3/1543>.

26 ¹⁸⁵ Maria Maza *et al.*, *Association of Habitual Checking Behaviors on Social Media With*
27 *Longitudinal Functional Brain Development*, 177 *JAMA Pediatrics* 160–167 (2023),
<https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812> [<https://perma.cc/64FA-9SPB>].

1 social media checking behavior “showed lower neural sensitivity to social anticipation” than those
2 who engaged in low to moderate checking behavior.¹⁸⁶

3 165. Problematic social media use is also linked to self-reported and diagnosed attention-
4 deficit/hyperactivity disorder (“ADHD”) in adolescents.¹⁸⁷ One longitudinal study of adolescents
5 found that over two years, high-frequency use of digital media, including social media, was
6 associated with statistically significant increased odds of developing ADHD symptoms.¹⁸⁸ As
7 another study notes, social media presents “potentially distracting activities [that] may co-occur
8 with other behaviours such as short-term attention, restlessness, forgetfulness, impulsiveness and
9 decreased ability to retain information. These behaviours are symptoms of ADHD that can lead to
10 maladaptive functioning in academic, home and recreational settings.”¹⁸⁹

11 166. Social media addiction can also cause individuals to perform worse in other
12 activities. In the academic context, several studies have shown that excessive social media use and
13 addiction is related to poorer academic performance and receiving lower grades.¹⁹⁰ Such poor

14
15 ¹⁸⁶ *Id.*

16 ¹⁸⁷ Tycho J. Dekkers & Jorien van Hoorn, *Understanding Problematic Social Media Use in*
17 *Adolescents with Attention-Deficit/Hyperactivity Disorder (ADHD): A Narrative Review and*
18 *Clinical Recommendations*, 12(12) *Brain Scis.* 1625 (2022), [https://www.mdpi.com/2076-](https://www.mdpi.com/2076-3425/12/12/1625)
19 [3425/12/12/1625](https://www.mdpi.com/2076-3425/12/12/1625); Maartje Boer *et al.*, *Attention Deficit Hyperactivity Disorder-Symptoms, Social*
20 *Media Use Intensity, and Social Media Use Problems in Adolescents: Investigating Directionality*,
21 91(4) *Child Dev.* 853–865 (2019), [https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/](https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdev.13334)
22 [cdev.13334](https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdev.13334).

23 ¹⁸⁸ Chaelin K. Ra *et al.*, *Association of Digital Media Use With Subsequent Symptoms of Attention-*
24 *Deficit/Hyperactivity Disorder Among Adolescents*, 320(3) *JAMA* 255–263 (2018),
25 <https://jamanetwork.com/journals/jama/fullarticle/2687861>.

26 ¹⁸⁹ Zaheer Hussain & Mark D. Griffiths, *The Associations between Problematic Social Networking*
27 *Site Use and Sleep Quality, Attention-Deficit Hyperactivity Disorder, Depression, Anxiety and*
28 *Stress*, 19 *Int’l J. Mental Health & Addiction* 686–700, 694 (2021), [https://link.springer.com/](https://link.springer.com/content/pdf/10.1007/s11469-019-00175-1.pdf)
[content/pdf/10.1007/s11469-019-00175-1.pdf](https://link.springer.com/content/pdf/10.1007/s11469-019-00175-1.pdf).

29 ¹⁹⁰ Emre Çam & Onur İşbulan, *A new addiction for teacher candidates: Social networks*, 11(3)
30 *Turkish Online J. Educ. Tech.* 14–19, 14 (2012), [https://www.researchgate.net/publication/](https://www.researchgate.net/publication/267556427_A_new_addiction_for_teacher_candidates_Social_networks)
31 [267556427_A_new_addiction_for_teacher_candidates_Social_networks](https://www.researchgate.net/publication/267556427_A_new_addiction_for_teacher_candidates_Social_networks); Mustafa Koc & Seval
32 Gulyagci, *Facebook Addiction Among Turkish College Students: The Role of Psychological Health,*
33 *Demographic, and Usage Characteristics*, 16(4) *Cyberpsychology, Behav., & Soc. Networking*
34 279–284 (2013), <https://doi.org/10.1089/cyber.2012.0249> [<https://perma.cc/RS4Y-H93L>]; Paul
35 Kirschner & Aryn Karpinski, *Facebook and academic performance*, 26(6) *Computs. Hum. Behav.*
36 (footnote continued)

1 academic performance is often linked to (1) distraction from multitasking on social media, thereby
2 adversely affecting learning, and (2) high enough usage to amount to addiction, which increases
3 academic procrastination and reduces sleep time and quality, increasing academic stress.¹⁹¹ And
4 studies show that the amount of time a student spends on social media is negatively correlated
5 with their academic performance, meaning the more a student spends on social media the worse
6 their grades are.¹⁹² In fact, 82% of Gen Z students say social media “has distracted them from their
7 schoolwork.”¹⁹³ Noting the “negative and significant relationship between the overall use of social
8 networks and academic performance of students,” one study author has stated it is “imperative”
9 for school authorities to “take interventional steps to help students who are dependent on these
10 [social media] networks and, through workshops, inform them about the negative consequences of
11 addiction to social networks.”¹⁹⁴ This places a large burden on school districts, including New

12
13 1237–1245 (2010), <https://doi.org/10.1016/j.chb.2010.03.024> [<https://perma.cc/5Y2A-R27T>];
14 Manjur Kolhar *et al.*, *Effect of social media use on learning, social interactions, and sleep duration*
15 *among university students*, 28(4) Saudi J. Biological Scis. 2216–2222 (2021),
<https://www.sciencedirect.com/science/article/pii/S1319562X21000103/pdfft?md5=b16529034494af5780843d4990768894&pid=1-s2.0-S1319562X21000103-main.pdf>.

16 ¹⁹¹ Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of*
17 *undergraduate medical students*, 77 Med. J. Armed Forces India 37–41 (2021),
18 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf> (citing Aryn C. Karpinski *et*
19 *al.*, *An exploration of social networking site use, multitasking, and academic performance among*
20 *United States and European university students*, 29(3) *Computs. Hum. Behav.* 1182–1192 (2013),
21 <https://www.sciencedirect.com/science/article/abs/pii/S0747563212002798> [[https://perma.cc/C43P-](https://perma.cc/C43P-J8V9)
22 *J8V9*]; Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and*
23 *academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) *BMC*
24 *Psychiatry* 28 (2019), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf)
25 [40359_2019_Article_305.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf)); see Yubo Hou *et al.*, *Social media addiction: Its impact, mediation,*
26 *and intervention*, 13(1) *J. Psychosocial Rsch. Cyberspace*, 2019, [https://cyberpsychology.eu/article/](https://cyberpsychology.eu/article/view/11562/10369)
27 [view/11562/10369](https://cyberpsychology.eu/article/view/11562/10369).

23 ¹⁹² Jamal Al-Menayes, *Social Media Use, Engagement and Addiction as Predictors of Academic*
24 *Performance*, 7(4) *Int’l J. Psych. Stud.* 86–94 (2015), <http://dx.doi.org/10.5539/ijps.v7n4p86>
25 [<https://perma.cc/4A7V-4RMD>].

25 ¹⁹³ Karen D’Souza, *Eight out of 10 Gen Zers say social media distracts from schools*, EdSource (Dec.
26 8, 2021), [https://edsources.org/updates/eight-out-of-10-gen-zers-say-social-media-distracts-from-](https://edsources.org/updates/eight-out-of-10-gen-zers-say-social-media-distracts-from-school)
27 [school](https://edsources.org/updates/eight-out-of-10-gen-zers-say-social-media-distracts-from-school).

27 ¹⁹⁴ Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and academic*
28 *performance in Iranian students of medical sciences: a cross-sectional study* at 1, 7(1) *BMC*
(footnote continued)

1 York City Public Schools.

2 167. Defendants’ platforms have triggered depression, anxiety, eating disorders, self-
3 harm, and suicidality among thousands of children, including youth in NYC Plaintiffs’
4 community, to which NYC Plaintiffs must respond. Defendants have created nothing short of a
5 national crisis.

6 168. From 2009 to 2019, the rate of high school students who reported persistent sadness
7 or hopelessness increased by 40% (to one out of every three students).¹⁹⁵ The share of kids who
8 seriously considered suicide increased by 36%, and those that created a suicide plan increased by
9 44%.¹⁹⁶

10 169. From 2007 to 2019, suicide rates among youth aged 10-24 in the United States
11 increased by 57%.¹⁹⁷ By 2018, suicide was the second leading cause of death for youth ages 10–
12 24.¹⁹⁸

13 170. From 2007 to 2016, emergency room visits for youth aged 5–17 rose about 117% for
14 anxiety disorders, 44% for mood disorders, and 40% for attention disorders.¹⁹⁹

15 171. By 2019, one-in-five children aged 3–17 in the United States had a mental,
16 emotional, developmental, or behavioral disorder.²⁰⁰ Mental health issues are particularly acute

17
18 Psychiatry 28 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf.

19 ¹⁹⁵ Vivek H. Murthy, Office of the Surgeon General, *Protecting Youth Mental Health: The U.S.*
20 *Surgeon General’s Advisory* (2021) at 8, <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

21 ¹⁹⁶ *Id.*

22 ¹⁹⁷ *Id.*

23 ¹⁹⁸ *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health*,
24 *Am. Acad. Pediatrics* (Oct. 19, 2021), <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

25 ¹⁹⁹ Charmaine Lo *et al.*, *Children’s Mental Health Emergency Department Visits: 2007–2016*,
26 145(6) *Pediatrics*, June 2020, at 3, https://publications.aap.org/pediatrics/article-pdf/145/6/e20191536/1080074/peds_20191536.pdf.

27 ²⁰⁰ Press Release, U.S. Dep’t of Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on*
28 *Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021),
(footnote continued)

1 among females.²⁰¹

2 172. In December 2021, the Surgeon General issued an advisory on the youth mental
3 health crisis.²⁰² The Surgeon General explained, “[m]ental health challenges in children,
4 adolescents, and young adults are real and widespread. Even before the pandemic, an alarming
5 number of young people struggled with feelings of helplessness, depression, and thoughts of
6 suicide—and rates have increased over the past decade.”²⁰³ Those “mental health challenges were
7 the leading cause of disability and poor life outcomes in young people.”²⁰⁴

8 173. In February 2023, the Centers for Disease Control (“CDC”) released new statistics
9 revealing the extent of the public health crisis in this country regarding youth mental health.²⁰⁵

10 174. This CDC survey showed that “[i]n 2021, 42% of high school students felt so sad or
11

12 <https://public3.pagefreezer.com/browse/HHS.gov/13-12-2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html>.

14 ²⁰¹ Vivek H. Murthy, Office of the Surgeon General, *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* (2021) at 3, <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>; see also Jean M. Twenge et al., *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 *Clinical Psych. Sci.* 3–17, 8 (2018), https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf (updated by Jean M. Twenge et al., *Corrigendum: Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 7 *Clinical Psych. Sci.* 397 (2019), <https://journals.sagepub.com/doi/epub/10.1177/2167702618824060>) (noting that mental health issues are particularly acute among females).

20 ²⁰² Vivek H. Murthy, Office of the Surgeon General, *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* (2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

22 ²⁰³ Press Release, U.S. Dep’t of Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021), <https://public3.pagefreezer.com/browse/HHS.gov/13-12-2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html>.

24 ²⁰⁴ *Id.*

26 ²⁰⁵ Azeen Ghorayashi & Roni Caryn Rabin, *Teen Girls Report Record Levels of Sadness, C.D.C. Finds*, N.Y. Times (May 10, 2023), <https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html?searchResultPosition=1> [<https://perma.cc/9CE6-4E4>].

1 hopeless almost every day for at least two weeks in a row that they stopped doing their usual
2 activities”; 57% of female high school students reported feeling “persistent feelings of sadness or
3 hopelessness” in 2021, compared to 36% in 2011; 41% of female respondents and 29% of all
4 respondents report experiencing “poor mental health” in the past 30 days; 30% of female high
5 school students had “seriously considered attempting suicide” in 2021, compared to 19% in 2011.

6 ²⁰⁶

7 175. In 2022, an analysis of datasets comprising 84,011 participants found that the cross-
8 sectional relationship between use of Defendants’ platforms and life satisfaction ratings is most
9 negative in younger adolescents.²⁰⁷ Longitudinal analyses revealed windows of sensitivity to
10 social media and adolescents between ages 11 and 19 years old, and that decreases in life
11 satisfaction ratings also predict subsequent increases in social media use.²⁰⁸

12 176. In 2023, young adolescent participants in a cohort study who engaged in habitual
13 social media checking behaviors showed a “distinct neurodevelopmental trajectory within regions
14 of the brain comprising the affective salience, motivational, and cognitive control networks in
15 response to anticipating social rewards and punishments compared with those who engaged in
16 nonhabitual checking behaviors.”²⁰⁹ In other words, these results showed that “teens who grow up
17 checking social media more often are hypersensitive to feedback from their peers.”²¹⁰ Previous
18 studies confirm that social media use is associated with changes to users’ brain anatomy. In
19 another study, MRI scans of 20 social media users with varying degrees of social media addiction

20
21 ²⁰⁶ *Youth Risk Behavior Surveillance System (YRBSS)*, CDC (Apr. 27, 2023), www.cdc.gov/yrbs.

22 ²⁰⁷ Amy Orben *et al.*, *Windows of developmental sensitivity to social media*, 13 *Nature Commc’ns*
1649 (2022), <https://www.nature.com/articles/s41467-022-29296-3.pdf>.

23 ²⁰⁸ *Id.*

24 ²⁰⁹ Maria Maza *et al.*, *Association of Habitual Checking Behaviors on Social Media With*
Longitudinal Functional Brain Development, 177 *JAMA Pediatrics* 160–167, 161 (2023),
25 <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812> [<https://perma.cc/64FA-9SPB>].

26 ²¹⁰ Ellen Barry, *Social Media Use Is Linked to Brain Changes in Teens, Research Finds*, *N.Y. Times*
27 (Jan. 3, 2023), <https://www.nytimes.com/2023/01/03/health/social-media-brain-adolescents.html>
28 [<https://perma.cc/7XAH-NGT8>].

1 showed social media addiction is associated with a more efficient impulsive brain system,
2 demonstrated by reduced grey matter volumes in the amygdala (bilaterally).²¹¹ This pruning of the
3 amygdala presumably leads to generating strong impulsive behaviors. Such brain alteration is
4 similar to that associated with other addictive activities like gambling and substance abuse.

5 177. Published in 2023, a systemic review from January 2004 to July 2022 evaluated the
6 impact of social media interventions on mental well-being and demonstrated that abstinence from
7 Defendants' platforms is effective in improving mental well-being, especially for depression.²¹²

8 178. Use of Defendants' platforms by adolescent females significantly affects their
9 wellbeing.²¹³ Moreover, the use of specific features on Defendants' platforms is a strong predictor
10 of negative body image perception, increase of social media addiction and of scores on the
11 Appearance Related Social Media Consciousness Scale, the Social Media Addiction Scale for
12 Adolescents, and the Body Image Scale.²¹⁴

13 179. A 2023 study from May to August of high school students demonstrated that as the
14 level of social media addiction increases, adolescents are becoming increasingly socially
15 ostracized and experiencing harmful levels of loneliness.²¹⁵

16 180. In another 2023 experimental study, 50 students were allocated randomly into
17 groups either using social media as normal or reducing their usage by 15 minutes a day. Over the
18

19 ²¹¹ Quinghua He *et al.*, *Brain Anatomy Alterations Associated with Social Networking Site (SNS)*
20 *Addiction*, 7 *Sci. Reps.* 45064 (2017), <https://www.nature.com/articles/srep45064.pdf>.

21 ²¹² Ruth Plackett *et al.*, *The Impact of Social Media Use Interventions on Mental Well-Being:*
22 *Systemic Review*, 25 *J. Med. Internet Rsch.* E44922 (2023), <https://www.jmir.org/2023/1/e44922/PDF>.

23 ²¹³ Sevim Çimke & Dilek Yıldırım Gürkan, *Factors affecting body image perception, social media*
24 *addiction, and social media consciousness regarding physical appearance in adolescents*, *J.*
Pediatric Nursing (2023), <https://www.sciencedirect.com/science/article/abs/pii/S0882596323002506>. [<https://perma.cc/U3XN-UHX4>].

25 ²¹⁴ *Id.*

26 ²¹⁵ Necmettin Çiftci *et al.*, *The mediating role of social ostracism in the effect of social media*
27 *addiction on loneliness in adolescents*, 73 *J. Pediatric Nursing* 177–183 (2023),
28 <https://www.sciencedirect.com/science/article/abs/pii/S0882596323002452> [<https://perma.cc/S9LQ-SGHN>].

1 three-month period, the group reducing social media activity reported “less social media
2 dependence, and improved general health and immune functioning, as well as reduced feelings of
3 loneliness and depression.”²¹⁶ Not only did this study confirm prior cross-sectional studies
4 showing an association between reduced social media use and improved health, this study had the
5 advantage “in showing an experimentally-controlled relationship between reduced social media
6 activity and improved wellbeing . . . adding to the suggestion of a causal connection[.]”²¹⁷

7 181. In May 2023, the Surgeon General issued an advisory: *Social Media and Youth*
8 *Mental Health*.²¹⁸ The advisory “calls attention to the growing concerns about the effects of social
9 media on youth mental health.”²¹⁹ The advisory noted that “[s]ocial media platforms are often
10 designed to maximize user engagement” and highlighted the use of “algorithms that leverage user
11 data” to achieve maximum engagement.²²⁰ Consistent with Defendants having known of the harm
12 their platforms cause users, particularly youth, the Surgeon General’s advisory noted “[t]here is
13 broad concern ... that a lack of access to data and lack of transparency from technology companies
14 have been barriers to understanding the full scope and scale of the impact of social media on
15 mental health and well-being.”²²¹ Put another way, Defendants have gone to great lengths to
16 prevent the public from gaining knowledge of the serious harms that result from excessive use of
17 social media.

18 182. Also in May 2023, the American Psychological Association issued a health advisory
19 on social media use in adolescence due to the harmful effects of social media use on adolescents’
20

21 ²¹⁶ Phil Reed *et al.*, *Reduction in Social Media Usage Produces Improvements in Physical Health*
22 *and Wellbeing: An RCT*, 8 J. Tech. Behav. Sci. 140–147, 146 (2023), [https://link.springer.com/
content/pdf/10.1007/s41347-023-00304-7.pdf](https://link.springer.com/content/pdf/10.1007/s41347-023-00304-7.pdf).

23 ²¹⁷ *Id.*

24 ²¹⁸ Vivek H. Murthy, Office of the Surgeon General, *Social Media and Youth Mental Health: The*
25 *U.S. Surgeon General’s Advisory* (2023), [https://www.hhs.gov/sites/default/files/sg-youth-mental-
health-social-media-advisory.pdf](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf).

26 ²¹⁹ *Id.* at 3.

27 ²²⁰ *Id.* at 9.

28 ²²¹ *Id.* at 11.

1 social, educational, psychological, and neurological development.²²² Both visible and unknown
2 features built into social media platforms inform adolescent experiences on such platforms. The
3 American Psychological Association recommends that Defendants’ platforms tailor features such
4 as the “Like” button, recommended posts, unrestricted time limits, endless scrolling, notices, and
5 alerts to the social and cognitive abilities of adolescent users.²²³

6 183. The scientific literature recognizes that design features of social media platforms
7 cause problematic social media use, social media addiction, and resulting negative mental health
8 outcomes.²²⁴ These harms result from the Defendants’ conduct in designing, developing,
9 producing, operating, promoting, distributing, and marketing their social media platforms to
10 attract and addict minors.

11 184. Further, “[n]early all researchers now agree that there are correlations between ...
12 time spent on social media and ... mental health problems.”²²⁵ The literature indicates that higher
13 use and higher social media addiction scores are more positively associated with more severe
14 health outcomes.²²⁶

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16 ²²² Am. Psych. Ass’n, *Health Advisory on Social Media Use in Adolescence* (May 2023),
<https://www.apa.org/topics/social-media-internet/health-advisory-adolescent-social-media-use.pdf>.

17 ²²³ *Id.* at 5.

18 ²²⁴ Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium*
19 *Games against the Background of Psychological and Economic Theories*, 16(14) *Int’l J. Env’t*
20 *Rsch. & Pub. Health* 2612 (2019),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-02612.pdf>; Christian
21 Montag & Jon D. Elhai, *On Social Media Design, (Online-) Time Well-spent and Addictive*
22 *Behaviors in the Age of Surveillance Capitalism*, 10 *Current Addiction Reps.* 610–616 (2023),
<https://link.springer.com/content/pdf/10.1007/s40429-023-00494-3.pdf>; Maèva Flayelle *et al.*, *A*
23 *taxonomy of technology design features that promote potentially addictive online behaviours*, 2
Nature Revs. Psych. 136–150 (2023), <https://doi.org/10.1038/s44159-023-00153-4>
[<https://perma.cc/TB9Z-TDNK>].

24 ²²⁵ Jonathan Haidt *et al.*, *Social Media and Mental Health: A Collaborative Review* at 11, N.Y.U.
25 (Nov. 1, 2023) (unpublished manuscript available at tinyurl.com/SocialMediaMentalHealthReview).

26 ²²⁶ See Yaoguo Geng *et al.*, *Smartphone addiction and depression, anxiety: The role of bedtime*
procrastination and self-control, 293 *J. Affective Disorders* 415–421, 417 (2021),
27 <https://doi.org/10.1016/j.jad.2021.06.062> [<https://perma.cc/U8CV-L63C>]; Pu Peng & Yanhui Liao,
Six Addiction Components of Problematic Social Media Use in Relation to Depression, Anxiety, and
28 *Stress Symptoms: a Latent Profile Analysis and Network Analysis*, 23 *BMC Psychiatry* 321 (2023),
(footnote continued)

1 185. As discussed herein, each of Defendants’ platforms manipulate young users’ brains
2 by building in stimuli and social reward mechanisms (e.g., “Likes”) that cause users, such as
3 youth in NYC Plaintiffs’ community, to compulsively seek social rewards. That, in turn, leads to
4 neuroadaptation; a child requires more and more stimuli to obtain the desired dopamine release,
5 along with further impairments of decision-making. It also leads to reward-seeking. These
6 consequences are the foreseeable results of Defendants’ engineering decisions.

7 186. Defendants’ actions have led to a national youth mental health crisis. Notably, the
8 American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry,
9 and the Children’s Hospital Association declared a national emergency based on the current state
10 of youth mental health.²²⁷ Moreover, in 2021, the Surgeon General issued an advisory alerting the
11 public that “[r]ecent national surveys of young people have shown alarming increases in the
12 prevalence of certain mental health challenges” and that “in 2019 one in three high school students
13 and half of female students reported persistent feelings of sadness or hopelessness, an overall
14 increase of 40% from 2009.”²²⁸

15 187. While Defendants have profited off of their design, development, production,
16 operation, promotion, distribution and marketing of their social media platforms to America’s
17 youth, NYC Plaintiffs have expended significant human and financial resources to address the
18 youth mental health crisis caused by Defendants.

19 <https://bmcp psychiatry.biomedcentral.com/counter/pdf/10.1186/s12888-023-04837-2.pdf>; Anthony
20 Robinson *et al.*, *Social comparisons, social media addiction, and social interaction: An examination*
21 *of specific social media behaviors related to major depressive disorder in a millennial population*,
22 24 *J. Applied Biobehavioral Rsch.*, Jan. 8, 2019, <https://doi.org/10.1111/jabr.12158>
[<https://perma.cc/938C-SD59>].

23 ²²⁷ Vivek H. Murthy, Office of the Surgeon General, *Protecting Youth Mental Health: The U.S.*
24 *Surgeon General’s Advisory* (2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)
25 [mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf); *AAP-AACAP-CHA Declaration of a National Emergency in Child and*
26 *Adolescent Mental Health*, *Am. Acad. Pediatrics* (Oct. 19, 2021),
[https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aapaacap-cha-](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aapaacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/)
27 [declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aapaacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/).

28 ²²⁸ Vivek H. Murthy, Office of the Surgeon General, *Protecting Youth Mental Health: The U.S.*
Surgeon General’s Advisory (2021) at 3, [https://www.hhs.gov/sites/default/files/surgeon-general-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)
[youth-mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf).

1 **6. Defendants could have avoided harming NYC Plaintiffs.**

2 188. Each Defendant solicited youth, including youth in NYC Plaintiffs’ community, on
3 the open market and encouraged the use of their addictive platforms.

4 189. Each Defendant offers its product to the public with dangerous, standardized features
5 and designs (discussed herein) that users, like youth in NYC Plaintiffs’ community, cannot
6 change.

7 190. Youth in NYC Plaintiffs’ community (along with millions of other U.S. users) are
8 incredibly valuable to Defendants. Although Defendants’ platforms are ostensibly free of charge,
9 in reality, Defendants charge users by collecting their data, which they then leverage into
10 advertising revenue. For example, Instagram’s terms of use state, in part:

11 We agree to provide you with the Instagram Service. ... Instead of paying to use
12 Instagram, by using the Service covered by these Terms, you acknowledge that we
13 can show you ads that businesses and organizations pay us to promote on and off the
14 Meta Company Products. We use your personal data, such as information about your
15 activity and interests, to show you ads that are more relevant to you.²²⁹

16 191. Each Defendant knew or should have known that its platforms were causing serious
17 harm and impacts on public schools and local communities, like NYC Plaintiffs’ schools, city, and
18 public hospitals.

19 192. Each Defendant could have, but purposefully failed to, design its platforms to protect
20 and avoid injury to kids and adolescent users, such as youth in NYC Plaintiffs’ community, and
21 avoid harm to NYC Plaintiffs.

22 193. Each Defendant knew or should have known that adolescents’ developing brains
23 leave them relatively less able to delay gratification, control impulses, or resist immediately

24 ²²⁹ The other Defendants have similar provisions. For example, TikTok’s Terms of Service state, in
25 part: “You acknowledge that we may generate revenues, increase goodwill or otherwise increase our
26 value from your use of the Services, including . . . through the sale of usage data[.]” Snap Terms of
27 Service permit Snap to use content submitted by users for any purpose, including revenue generating
28 purposes, and acknowledge Snap leverages the collection of user data to sell advertising. YouTube’s
Terms of Service similarly permit YouTube to use content uploaded by users for business purposes,
including monetization of that content, and Google’s Privacy Policy (applicable to YouTube) details
the wide range on user data Google collects, whether you are a registered user or not.

1 pleasurable social rewards.

2 194. Each Defendant knew or should have known that the more children use social media,
3 the harder it is for them to quit.

4 195. Each Defendant knew or should have known that excessive use of its platforms has
5 severe and wide-ranging effects on youth mental and physical health.

6 196. Each Defendant knew or should have known that youth are especially vulnerable to
7 long-term harm from its addictive platforms.

8 197. Each Defendant knew or should have known that many of its users are under the age
9 of 13, despite the limitations set out in COPPA.

10 198. The harm to NYC Plaintiffs caused by Defendants' actions was foreseeable.
11 Defendants purposefully sought to attract and addict minors—including those who attend NYC
12 Plaintiffs' schools and those in NYC Plaintiffs' community—to their social media platforms and
13 engaged in substantial efforts to promote, distribute, and market their social media platforms to
14 minors, despite knowing that their design choices made the social media platforms incredibly
15 dangerous to adolescents. Moreover, while deliberately seeking to attract and addict minors to
16 their platforms, Defendants were aware that school districts, public health departments, and public
17 hospitals—which provide adolescents with critical educational, counseling, mental health, and
18 social services—would be forced to address, through financial and human resources, the
19 devastating impact that compulsive social media use and addiction is known to have on youth
20 mental health. Accordingly, NYC Plaintiffs were in the foreseeable zone of risk from Defendants'
21 targeting of minors who reside in NYC Plaintiffs' local communities and attend NYC Plaintiffs'
22 schools.

23 199. Despite the foreseeable risk to youth and entities like NYC Plaintiffs, each
24 Defendant failed to adequately warn youth or their parents, including NYC Plaintiffs' students and
25 families, of the known risks and harms of using its platforms. Defendants also failed to warn
26 school districts, cities, and hospitals, including NYC Plaintiffs, of the impact of their platforms on
27 youth.

28 200. Each Defendant avoided design changes that would have increased youth safety.

1 And, each Defendant pressed ahead with changes designed to keep kids hooked, even though they
2 knew or should have known those changes presented risks to the wellbeing of youth.

3 201. Each Defendant was in a superior position to control the risks of harm, ensure the
4 safety of its platforms, and insure against and spread the costs of any harm resulting from its
5 dangerous choices.

6 202. NYC Plaintiffs and the public did not have, and could not have had, as much
7 knowledge as Defendants about Defendants’ platforms and how they were dangerously designed.

8 **B. FACTUAL ALLEGATIONS AS TO META**

9 **1. Background and overview of Meta’s platforms.**

10 203. Meta coded, engineered, manufactured, produced, assembled, and operates Facebook
11 and Instagram, two of the world’s most popular social media platforms, and placed them into the
12 stream of commerce. In 2022, two billion users worldwide were active on Instagram each month,
13 and almost three billion were monthly active users of Facebook.²³⁰ This enormous reach has been
14 accompanied by enormous damage for adolescent users.

15 204. Meta understands that its platforms are used by kids under 13: “[T]here are definitely
16 kids this age on [Instagram][.]”²³¹ Meta understands that its platforms are addictive: “(1) teens feel
17 addicted to [Instagram] and feel a pressure to be present, (2) like addicts, they feel that they are
18 unable to stop themselves from being on [Instagram], and (3) the tools we currently have aren’t
19 effective at limiting their time on the ap [sic].”²³² Meta also understands that addictive use leads to
20 problems: “it just keeps people coming back even when it stops being good for them[.]”²³³
21 Further, Meta understands that these problems can be so extreme as to include encounters between
22 adults and minors—with such “sex-talk” 32 times more prevalent on Instagram than on
23

24 ²³⁰ Alexandra Barinka, *Meta’s Instagram Users Reach 2 Billion, Closing In on Facebook*,
25 Bloomberg (Oct. 26, 2022), [https://www.bloomberg.com/news/articles/2022-10-26/meta-s-
instagram-users-reach-2-billion-closing-in-on-facebook](https://www.bloomberg.com/news/articles/2022-10-26/meta-s-instagram-users-reach-2-billion-closing-in-on-facebook) [<https://perma.cc/TM83-6MUZ>].

26 ²³¹ META3047MDL-003-00123666 at META3047MDL-003-00123666.

27 ²³² META3047MDL-003-00157036 at META3047MDL-003-00157036.

28 ²³³ META3047MDL-003-00011760 at META3047MDL-003-00011761.

1 Facebook.²³⁴

2 205. Despite this knowledge, Meta has abjectly failed at protecting child users of
3 Instagram and Facebook. Rather than resolving the problems created by its platforms, “the mental
4 health team stopped doing things . . . it was defunded . . . [and] completely stopped[.]”²³⁵ “We’ve
5 consistently deprioritized addiction as a work area[.]”²³⁶ Zuckerberg himself was personally
6 warned: “We are not on track to succeed for our core well-being topics (problematic use, bullying
7 & harassment, connections, and SSI),[] and are at increased regulatory risk and external criticism.
8 These affect everyone, especially [y]outh and [c]reators; if not addressed, these will follow us into
9 the Metaverse[.]”²³⁷

10 206. Yet Meta did nothing. Like with considering actions to protect children in other
11 ways, “the growth impact was too high.”²³⁸ Taking action would lower usage of (and therefore
12 lower profits earned from) a critical audience segment. “Youth and [t]eens are critically important
13 to Instagram. . . . there’s a new group of 13-year-olds every year and the competition over their
14 [s]ocial [m]edia engagement has never been more fierce.”²³⁹

15 207. Meta’s gestures toward youth safety were never serious and always driven by public
16 relations: “it’s all theatre.”²⁴⁰ Meta offered tools to kids and parents, like “time spent,” that it knew
17 presented false data—“Our data as currently shown is incorrect. . . . We’re sharing bad metrics
18 externally. . . . [although] we vouch for these numbers.”²⁴¹ At the same time, Meta engaged in a
19 cynical campaign to “counter-messag[e] around the addiction narrative” by discrediting existing

20 _____
21 ²³⁴ META3047MDL-003-00119838 at META3047MDL-003-00119838.

22 ²³⁵ META3047MDL-003-00011697 at META3047MDL-003-00011698.

23 ²³⁶ META3047MDL-003-00157133 at META3047MDL-003-00157134.

24 ²³⁷ META3047MDL-003-00188109 at META3047MDL-003-00188114 (footnote omitted). “SSI”
refers to “suicide and self-injury.” META3047MDL-003-00068863 at META3047MDL-003-
00068863, META3047MDL-003-00068872.

25 ²³⁸ META3047MDL-003-00013254 at META3047MDL-003-00013254.

26 ²³⁹ META3047MDL-003-00030070 at META3047MDL-003-00030071.

27 ²⁴⁰ META3047MDL-003-00053803 at META3047MDL-003-00053803.

28 ²⁴¹ META3047MDL-003-00157133 at META3047MDL-003-00157133.

1 research as “BS...psedu [sic] science[.]”²⁴² Meta knew better. Meta failed to prevent the harms
2 suffered by youth, despite having ample ability and knowledge.

3 **a. Meta’s origins and the development of Facebook.**

4 208. In October 2003, a sophomore at Harvard College named Mark Zuckerberg hacked
5 into the websites of Harvard’s residential dorms to collect photos of students. He then designed a
6 website called “Facemash” that invited users to rank the “hotness” of female students by
7 comparing their photos side-by-side. In just one day, Facemash users cast over 22,000 votes
8 judging the looks of women at Harvard.²⁴³ This was precisely the point of Facemash, as its
9 homepage made clear: “Were we let in for our looks? No. Will we be judged on them? Yes.”²⁴⁴
10 When interviewed about Facemash, Zuckerberg stated, “I’m a programmer and I’m interested in
11 the algorithms and math behind it[.]”²⁴⁵ Zuckerberg was summoned to appear before Harvard
12 College’s disciplinary body.

13 209. After narrowly escaping expulsion, Zuckerberg began writing code for a new
14 website, thefacebook.com. The growth of the product that subsequently became Facebook has
15 been extensively documented and was the subject of an Academy Award-winning film.²⁴⁶ By the
16 end of 2005, Facebook had expanded its reach to thousands of colleges and high schools in the
17 United States and abroad. Over the coming years, Facebook grew well beyond campuses, reaching
18

19 ²⁴² META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-
20 00082166.

21 ²⁴³ Katherine A. Kaplan, *Facemash Creator Survives Ad Board*, Harv. Crimson (Nov. 19, 2003),
22 <https://www.thecrimson.com/article/2003/11/19/facemash-creator-survives-ad-board-the/>; Bari M.
23 Schwartz, *Hot or Not? Website Briefly Judges Looks*, Harv. Crimson (Nov. 4, 2003),
24 <https://www.thecrimson.com/article/2003/11/4/hot-or-not-website-briefly-judges/>; Sam Brodsky,
Everything to know about Facemash, the site Zuckerberg created in college to rank ‘hot’ women,
Metro (Apr. 12, 2018), [https://www.metro.us/everything-to-know-about-facemash-the-site-](https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-created-in-college-to-rank-hot-women/)
25 [zuckerberg-created-in-college-to-rank-hot-women/](https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-created-in-college-to-rank-hot-women/); @noamcohen, Twitter (Mar. 20, 2018, 12:27
26 PM), <https://twitter.com/noamcohen/status/976178549550931968> [<https://perma.cc/5NL3-LYWG>].

27 ²⁴⁴ Bari M. Schwartz, *Hot or Not? Website Briefly Judges Looks*, Harv. Crimson (Nov. 4, 2003),
28 <https://www.thecrimson.com/article/2003/11/4/hot-or-not-website-briefly-judges/>.

²⁴⁵ *Id.*

²⁴⁶ *The Social Network*, Columbia Pictures (2010).

1 over 100 million total active users by Fall 2008. By the end of 2011, Facebook's photo collection
2 from its users was projected to include 140 billion photos and reach 800 million users.²⁴⁷ By the
3 end of 2011, Facebook, Inc. had also turned its initial losses into immense profitability, bringing
4 in annual revenues of \$3.7 billion and working with an operating cash of \$1.5 billion.²⁴⁸

5 210. However, Facebook knew its future success was not guaranteed. On February 1,
6 2012, Facebook, Inc. filed with the SEC for an initial public offering. Facebook's filing noted that
7 its historic performance might not continue indefinitely:

8 A number of other social networking companies that achieved early popularity have
9 since seen their active user bases or levels of engagement decline, in some cases
10 precipitously. There is no guarantee that we will not experience a similar erosion of
11 our active user base or engagement levels. A decrease in user retention, growth, or
12 engagement could render Facebook less attractive to developers and advertisers,
13 which may have a material and adverse impact on our revenue, business, financial
14 condition, and results of operations.²⁴⁹

15 211. Facebook, Inc. also disclosed that the proliferation of smartphones could materially
16 affect its ongoing prospects:

17 [O]ur users could decide to increasingly access our products primarily through mobile
18 devices. We do not currently directly generate any meaningful revenue from the use
19 of Facebook mobile products, and our ability to do so successfully is unproven.
20 Accordingly, if users continue to increasingly access Facebook mobile products as a
21 substitute for access through personal computers, and if we are unable to successfully
22 implement monetization strategies for our mobile users, our revenue and financial
23 results may be negatively affected.²⁵⁰

24 212. Facebook actively pursued changes to its product, including adding design features

21 ²⁴⁷ Richard MacManus, *Facebook Mobile Usage Set to Explode*, Read Write Web (Oct. 27, 2011),
22 [https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook_mo-
23 bile_usage_set_to_explode.php](https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook_mobile_usage_set_to_explode.php); Athima Chansanchai, *One-third of year's digital photos are on
24 Facebook*, NBC News (Sept. 20, 2011), [https://www.nbcnews.com/news/world/one-third-years-
25 digital-photos-are-facebook-flna120576](https://www.nbcnews.com/news/world/one-third-years-digital-photos-are-facebook-flna120576).

26 ²⁴⁸ Erick Schonfeld, *Facebook's Profits: \$1 Billion, On \$3.7 Billion in Revenues*, TechCrunch (Feb.
27 1, 2012), <https://techcrunch.com/2012/02/01/facebook-1-billion-profit/>.

28 ²⁴⁹ Facebook, Inc., Registration Statement (Form S-1) at 11 (Feb. 1, 2012),
[https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc2879-
54_2](https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc287954_2).

²⁵⁰ *Id.* at 13.

1 offered to the public. As a result of these actions, Facebook achieved its goal. As of October 2021,
2 Facebook had ballooned to roughly 2.91 billion monthly active users, thus reaching 59% of the
3 world's social networking population, the only social media product to reach over half of all social
4 media users. At least 6% of these users are children in the U.S. between the ages of 9 and 11.²⁵¹

5 213. Since its inception, Facebook has implemented several changes, developments, and
6 designs to its product to prolong user engagement and impose alterations to the user experience.
7 As discussed further below, several changes, developments, and designs render the product
8 dangerous, addictive, and harmful.

9 **b. Modifications of Facebook's product features over time.**

10 214. When Meta launched thefacebook.com on February 4, 2004, only Harvard students
11 could create accounts using their university-issued email addresses. In March 2004, students at
12 Stanford, Columbia, and Yale were permitted to join, and eventually, any student with a college-
13 or university-issued email address could join Facebook.²⁵² In 2005, Facebook was opened to high
14 school students, provided they were invited by someone who was already using the site.²⁵³ By
15 September 2006, Facebook was preparing to open membership to all users.²⁵⁴ At the time, Meta
16 claimed that it was open only to persons aged 13 and older with a valid email address.²⁵⁵
17 However, Meta did not require verification of a user's age or identity and did not verify users'

18 _____
19 ²⁵¹ Katherine Schaeffer, *7 facts about Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021),
<https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

20 ²⁵² Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12,
21 2006), [https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-](https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html)
22 [opened-to-others.html \[https://perma.cc/DK5D-J4UZ\]](https://perma.cc/DK5D-J4UZ); Adam P. Schneider, *Facebook Expands Beyond Harvard*, The Harvard Crimson (Mar. 1, 2004), [https://www.thecrimson.com/article/2004/](https://www.thecrimson.com/article/2004/3/1/facebook-expands-beyond-harvard-harvard-students/)
[3/1/facebook-expands-beyond-harvard-harvard-students/](https://perma.cc/DK5D-J4UZ).

23 ²⁵³ Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16, 2005),
24 <https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html>
[\[https://perma.cc/4EJT-2K38\]](https://perma.cc/4EJT-2K38).

25 ²⁵⁴ Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12,
26 2006), [https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-](https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html)
[opened-to-others.html \[https://perma.cc/DK5D-J4UZ\]](https://perma.cc/DK5D-J4UZ).

27 ²⁵⁵ *Id.*; Jennifer Van Grove, *Facebook then and now (pictures)*, CNET (Feb. 13, 2014),
28 <https://www.cnet.com/pictures/facebook-then-and-now-pictures/>.

1 email addresses. As a result, underage users could easily register an account with and access
2 Facebook.

3 215. At first, Facebook was a collection of personal profiles and single photos. It was
4 described by *The New York Times* as “a fancy electronic version of the whiteboard that students
5 often mount on their doors to leave and receive messages.”²⁵⁶ Users could post a single profile
6 picture, add personal details such as gender, birthdate, phone number, and interests, or connect
7 with other users by “friending” them, either by searching for them or inviting them by email.
8 Users could also display their relationship statuses or, alternatively, what they were “[l]ooking
9 for” (e.g., friendship, dating, a relationship, “random play,” or “whatever I can get”) and
10 “[i]nterested in” (e.g., women, men). In September 2004, however, Meta introduced the “Wall,”
11 which allowed users to interact with “friends” by posting on each other’s profiles. This product
12 feature kept users returning to Facebook to monitor Wall activity.

13 216. In 2005, Facebook began allowing users to upload an unlimited number of photos,
14 making it the first photo hosting website to do so.²⁵⁷

15 217. In 2006, Meta introduced the Newsfeed to Facebook.²⁵⁸ While previously “[e]very
16 browsing session was like a click-powered treasure hunt[,]”²⁵⁹ the Newsfeed provided a
17 centralized home page where users could view their friends’ activity, including any changes to
18 their profiles or activity on the app, such as, for example, uploading new pictures, or a change in
19 relationship status.²⁶⁰ It was the first “social feed” of its kind, and, as intended, increased time

21 ²⁵⁶ Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16, 2005),
22 <https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html>
[<https://perma.cc/4EJT-2K38>].

23 ²⁵⁷ Craig Kanalley, *A History of Facebook Photos (Infographic)*, Huffington Post (Aug. 2, 2011),
https://www.huffpost.com/entry/facebook-photos-infographic_n_916225.

24 ²⁵⁸ *This Is How Facebook Has Changed Over the Past 14 Years*, Think Mktg. (Feb. 6, 2018),
25 <https://thinkmarketingmagazine.com/facebook-celebrates-14-years-of-milestones-a-timeline/>.

26 ²⁵⁹ Jillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*, World
27 Econ. F. (Sept. 9, 2016), <https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed>.

28 ²⁶⁰ *Id.*

1 spent on the product.²⁶¹ Users immediately decried this feature as an invasion of privacy.²⁶² Mark
2 Zuckerberg rationalized the feature by saying, “we agree, stalking isn’t cool; but being able to
3 know what’s going on in your friends’ lives is.”²⁶³ The Newsfeed algorithm was originally
4 designed to maximize a user’s time spent in one session. However, Meta later changed the code to
5 maximize as many use sessions as possible. The frequency of sessions is a strong indicator of
6 problematic use, a point internal Facebook researchers have made when suggesting that Facebook
7 should “help people consolidate their use of Facebook into fewer sessions.”²⁶⁴ Despite this
8 knowledge, Meta continued to focus on maximizing sessions, including for teens,²⁶⁵ even
9 prioritizing the metric over “integrity” improvements to its platforms.²⁶⁶

10 218. In May 2007, Meta launched a video service on Facebook, which allowed it to
11 compete with YouTube and the then-popular MySpace.²⁶⁷ Users could upload videos or record
12 them from a webcam.

13 219. In April 2008, Meta launched Facebook Chat, which later became Facebook
14 Messenger, allowing users to have private conversations with each other.²⁶⁸ Facebook Chat
15 appeared as a permanent bar across the bottom of users’ screens; it also provided users the ability
16 to see which friends were “online” and presumably available to chat. Facebook Chat allowed users

18 ²⁶¹ *Id.*

19 ²⁶² Moneywatch, *Facebook Under Fire for New Feature*, CBS News (Sept. 7, 2006),
<https://www.cbsnews.com/news/facebook-under-fire-for-new-feature/>.

20 ²⁶³ Jillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*, World
21 Econ. F. (Sept. 9, 2016), [https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-
years-old-this-is-how-the-site-has-changed](https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed).

22 ²⁶⁴ Haugen_00010114 at Haugen_00010121.

23 ²⁶⁵ *See, e.g.*, META3047MDL-003-00161881 at META3047MDL-003-00161915 (highlighting
moderate decline in sessions among teen Instagram users in the United States).

24 ²⁶⁶ *See* META3047MDL-003-00170806 at META3047MDL-003-00170822 (Instagram sessions
25 “cannot decrease”).

26 ²⁶⁷ Pete Cashmore, *Facebook Video Launches: YouTube Beware!*, Mashable (May 24, 2007),
<https://mashable.com/archive/facebook-video-launches>.

27 ²⁶⁸ Dan Farber, *Facebook Chat begins to roll out*, CNET (Apr. 6, 2008),
28 <https://www.cnet.com/culture/facebook-chat-begins-to-roll-out/>.

1 to immerse themselves even deeper into Meta’s product; one commentator noted that “[b]y
2 making Facebook more real time/presence oriented, Facebook session length should go up a
3 lot.”²⁶⁹

4 220. In May 2008, Meta added a “People You May Know” feature to the product, touting
5 it as a way to “connect [users] to more of your friends” on Facebook.²⁷⁰ Facebook’s algorithms
6 utilize the vast amount of data it collects from its users to make personalized suggestions to users
7 for “friending.”²⁷¹ It utilizes information such as a user’s friends list, their friends’ friends list,
8 education information, and work information, along with other data, to make these suggestions.²⁷²
9 Some users dislike the feature, complaining that it constantly shows them people they do not want
10 to friend, or even suggests people in sexually explicit poses[,]²⁷³ but Facebook does not provide
11 the option to disable this feature.

12 221. In February 2009, Meta launched the “Like” button on Facebook.²⁷⁴ The button
13 allowed users to provide a quick reaction, as opposed to typing out a comment. Facebook’s
14 algorithm counts and displays Likes to other users. The measure also served as a social measuring
15 stick, by which users could gauge the success of their posts, photographs, and videos. Soon after,
16 Meta expanded the Like feature to comments as well. Users could also use the Like button to
17 follow public figures, such as brands or publishers. When a user Liked a brand, for example, Meta
18 would use that information to show ads for that brand to the user’s friends on Facebook.²⁷⁵ In
19 April 2010, Meta launched “social plug-ins” that would allow people to “Like” things on the

20 ²⁶⁹ *Id.*

21 ²⁷⁰ Kashmir Hill, ‘People You May Know:’ A Controversial Facebook Feature’s 10-Year History,
22 Gizmodo (Aug. 8, 2018), <https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959>.

23 ²⁷¹ *Id.*

24 ²⁷² *Id.*

25 ²⁷³ *Id.*

26 ²⁷⁴ Will Oremus, *How Facebook Designed the Like Button—and made social media into a*
27 *Popularity Contest*, Fast Co. (Nov. 15, 2022), <https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest>.

28 ²⁷⁵ *Id.*

1 Internet outside of Facebook. Meta used the button to track Facebook users’ engagement across
2 the Internet, leveraging the data it gathered to sell targeted ads and fuel the Newsfeed algorithm.²⁷⁶
3 The button also shaped users’ own behavior, as they were conditioned to act and interact in
4 whatever ways would generate the Like rewards, or risk having their activity hidden from their
5 friends’ Newsfeeds.²⁷⁷

6 222. Also in 2009, Meta changed the Newsfeed experience from chronological to
7 algorithmic ordering, with Meta now dictating which posts users would see by highlighting “top
8 stories” in each user’s Newsfeed.²⁷⁸

9 223. In December 2010, Meta began using facial recognition to identify people in users’
10 Facebook photos and suggest that users tag them.²⁷⁹ Rather than letting users opt-in to the feature,
11 Meta automatically enabled it for all users.²⁸⁰

12 224. Meta also debuted infinite scrolling in 2010, initially for photos, but later for its core
13 Newsfeed, ensuring that users would never reach the bottom of a page and would, instead, keep
14 scrolling without end or limits, leading to excessive and compulsive product use.²⁸¹

15 225. In August 2012, Meta introduced the Facebook Messenger app, a feature that
16 allowed users to see when their friends were last active on the product.²⁸²

17 ²⁷⁶ *Id.*

18 ²⁷⁷ *Id.*

19 ²⁷⁸ Alex Hern, *Facebook to restore chronological feed of posts from friends*, Guardian (July 21,
20 2022), [https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-
feed-of-posts-from-friends](https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-from-friends).

21 ²⁷⁹ Ben Parr, *Facebook brings facial recognition to photo tagging*, Mashable (Dec. 16, 2010),
22 [http://www.cnn.com/2010/TECH/social.media/12/16/facebook.facial.recognition.mashable/index.ht
ml](http://www.cnn.com/2010/TECH/social.media/12/16/facebook.facial.recognition.mashable/index.html).

23 ²⁸⁰ Charles Arthur, *Facebook in new privacy row over facial recognition feature*, Guardian (June 8,
24 2011), [https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-
recognition?INTCMP=SRCH](https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-recognition?INTCMP=SRCH).

25 ²⁸¹ Bob Leggitt, *How the Internet Destroyed Your Attention Span*, Popzazzle (Apr. 30, 2021),
26 <https://popzazzle.blogspot.com/2021/04/how-the-internet-destroyed-your-attention-span.html>.

27 ²⁸² Billy Gallagher, *Facebook Brings Notifications, Album-Specific Uploads to Standalone Camera*
28 *App*, TechCrunch (Aug. 28, 2012), [https://techcrunch.com/2012/08/28/facebook-brings-
notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-
\(footnote continued\)](https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-)

1 226. In August 2015, Meta launched Facebook Live, which allowed users to live-stream
2 videos.²⁸³ It immediately prompted more engagement with the platform and furthered Meta’s goal
3 of keeping users coming back, both to create the videos and to interact with them.²⁸⁴

4 227. In February 2016, Meta expanded Facebook’s “Like” feature for posts, adding
5 “Reactions” such as “like,” “love,” “haha,” “wow,” “sad,” and “angry.”²⁸⁵ The following year,
6 reactions were extended to comments.²⁸⁶ In a manner similar to Likes, these reactions further
7 manipulated adolescents’ behavior, preying on their psychological vulnerabilities to produce
8 compulsive use.

9 228. In March 2017, following the launch of a similar product on Instagram, Meta
10 introduced Facebook Stories, with the hope of competing with the success of Snapchat among
11 young people.²⁸⁷ With Stories, users could post short, ephemeral videos that appeared for 24-hours
12 at the top of friends’ Newsfeeds.²⁸⁸ Stories is designed to keep users coming back to the platform
13 at least daily or otherwise risk missing out, feeding performance metrics that are crucial to Meta’s
14 bottom line.

15 229. Later that year, in December 2017, Meta rolled out Messenger Kids, a messaging
16 app designed for kid’s ages 6 to 12,²⁸⁹ for the purpose of getting younger users on its product

17 _____
18 schawbel_art&blogger=dan-schawbel#.

19 ²⁸³ Joe Lazauskus, *The Untold Story of Facebook Live*, Fast Co. (Sept. 29, 2016),
<https://www.fastcompany.com/3064182/the-untold-story-of-facebook-live>.

20 ²⁸⁴ *Id.*

21 ²⁸⁵ Casey Newton, *Facebook rolls out expanded Like button reactions around the world*, Verge (Feb.
22 24, 2016), <https://www.theverge.com/2016/2/24/11094374/facebook-reactions-like-button>.

23 ²⁸⁶ Natt Garun, *Facebook reactions have now infiltrated comments*, Verge (May 3, 2017),
<https://www.theverge.com/2017/5/3/15536812/facebook-reactions-now-available-comments>.

24 ²⁸⁷ Casey Newton, *Facebook launches stories to complete its all-out assault on Snapchat*, Verge
25 (Mar. 28, 2017), <https://www.theverge.com/2017/3/28/15081398/facebook-stories-snapchat-camera-direct>.

26 ²⁸⁸ *Id.*

27 ²⁸⁹ Nick Statt, *Facebook launches a version of Messenger for young children*, Verge (Dec. 4, 2017),
28 <https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview>.

1 sooner. The app does not require a Facebook account, and instead allows children to create
2 accounts that are managed through parents’ Facebook accounts.²⁹⁰ Meta touted it as a way to
3 “give[] parents more control.”²⁹¹ The app, however, still collects an extraordinary amount of data
4 about its child users, including their messages, any photos they send, and what features they use
5 on the app.²⁹² Currently, there are no other official Facebook platforms marketed publicly by Meta
6 as intended for children under 13 (despite the proliferation of such users on Instagram and
7 Facebook). However, as of April 2021, Meta was actively seeking to develop ways for children as
8 young as six to use the product.²⁹³

9 230. In August 2020, Meta introduced “Reels” on Instagram.²⁹⁴ Reels are short videos
10 posted by other Instagram users, presented in an algorithmically generated feed, and in a full-
11 screen format popularized by TikTok. Meta subsequently introduced Reels to Facebook in
12 2021.²⁹⁵ As explained more fully below, Meta committed to making videos more and more
13 prevalent on of their platforms to attract and keep younger users in the face of competition from
14 TikTok.

15 **c. Facebook’s acquisition and control of Instagram.**

16 231. On or around April 6, 2012, Zuckerberg called Kevin System, one of the co-
17
18

19 ²⁹⁰ *Id.*

20 ²⁹¹ Loren Cheng, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4,
21 2017), <https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/>.

22 ²⁹² Nitasha Tiku, *Facebook for 6-Year-Olds? Welcome to Messenger Kids*, Wired (Dec. 5, 2017),
23 <https://www.wired.com/story/facebook-for-6-year-olds-welcome-to-messenger-kids/>
24 [<https://perma.cc/WYE3-UBY>].

25 ²⁹³ Ezra Kaplan & Jo Ling Kent, *Documents reveal Facebook targeted children as young as 6 for
26 consumer base*, NBC News (Oct. 29, 2021), [https://www.nbcnews.com/tech/social-media/facebook-
27 documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma](https://www.nbcnews.com/tech/social-media/facebook-documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma).

28 ²⁹⁴ Instagram, *Introducing Instagram Reels*, Meta (Aug. 5, 2020),
<https://about.fb.com/news/2020/08/introducing-instagram-reels/>.

²⁹⁵ Facebook, *Launching Reels on Facebook in the US*, Meta (Sept. 29, 2021),
<https://about.fb.com/news/2021/09/launching-reels-on-facebook-us/>.

1 founders of Instagram, offering to purchase his company.²⁹⁶

2 232. Instagram launched as a mobile-only app that allowed users to create, filter, and
3 share photos. On the first day of its release in October 2010, it gained a staggering 25,000 users.²⁹⁷
4 By April 2012, Instagram had approximately 27 million users. When Instagram released an
5 Android version of its app—right around the time of Zuckerberg’s call—it was downloaded more
6 than a million times in less than a day.²⁹⁸ Instagram’s popularity is so widespread and image-
7 based, a new term has grown up around it for the perfect image or place, “Instagrammable.”²⁹⁹ Its
8 users also use a variety of slang derived from the product, such as “IG”; “The Gram”; “Do it for
9 the Gram”, a phrase used by a user performing a risky or unusual action to garner attention;
10 “Finsta,” a contraction of fun or fake Instagram used to refer to secondary accounts; among other
11 slang.

12 233. On April 9, 2012, just days after Zuckerberg’s overture to Systrom, Facebook, Inc.
13 purchased Instagram, Inc. for \$1 billion in cash and stock. This purchase price was double the
14 valuation of Instagram implied by a round of funding the company had closed days earlier.³⁰⁰

15 234. Facebook, Inc. held its initial public offering less than two months after acquiring
16
17

18 ²⁹⁶ Nicholas Carlson, *Here’s The Chart That Scared Zuckerberg Into Spending \$1 Billion On*
19 *Instagram*, Bus. Insider (Apr. 14, 2012), [https://www.businessinsider.com/heres-the-chart-that-](https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)
20 [scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4](https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)
[[https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-](https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)
[scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4](https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)].

21 ²⁹⁷ Dan Blystone, *Instagram: What It Is, Its History, and How the Popular App Works*, Investopedia
22 (Oct. 22, 2022), [https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram)
[photo0sharing-app.asp#:~:text=History%20of%20Instagram](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram).

23 ²⁹⁸ Kim-Mai Cutler, *From 0 To \$1 Billion In Two Years: Instagram’s Rose-Tinted Ride To Glory*,
24 TechCrunch (Apr. 9, 2012), [https://techcrunch.com/2012/04/09/instagram-story-facebook-](https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/)
[acquisition/](https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/).

25 ²⁹⁹ Sarah Frier, *No Filter: The Inside Story of Instagram* (Simon & Schuster 2020).

26 ³⁰⁰ Alexia Tsotsis, *Right Before Acquisition, Instagram Closed \$50M At A \$500M Valuation From*
27 *Sequoia, Thrive, Greylock And Benchmark*, TechCrunch (Apr. 9, 2012),
[https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-](https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/)
28 [valuation-from-sequoia-thrive-greylock-and-benchmark/](https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/).

1 Instagram, Inc.³⁰¹

2 235. Zuckerberg’s willingness to pay a premium for Instagram was driven by his instinct
3 that Instagram would be vital to reaching a younger, smartphone-oriented audience—and thus
4 critical to his company’s future success.

5 236. This was prescient. Instagram’s revenue grew exponentially from 2015 to 2022.³⁰² A
6 study conducted in the second quarter of 2018 showed that, over the prior year, advertisers’
7 spending on Instagram grew by 177%—more than four times the growth of ad spending on
8 Facebook.³⁰³ Likewise, visits to Instagram rose by 236%, nearly *thirty* times the growth in site
9 visits experienced by Facebook during the same period.³⁰⁴ By 2021, Instagram accounted for over
10 half of Meta’s \$50.3 billion in net advertising revenues.³⁰⁵

11 237. Meta has claimed credit for Instagram’s success since its acquisition. Zuckerberg
12 told market analysts that Instagram “wouldn’t be what it is without everything that we put into it,
13 whether that’s the infrastructure or our advertising model[.]”³⁰⁶

14 238. Instagram has become the most popular photo-sharing social media product among
15 teenagers and young adults in the United States. 62% of American teens use, with 10% of users
16

17 ³⁰¹ Evelyn Rusli & Peter Eavis, *Facebook Raises \$16 Billion in I.P.O.*, N.Y. Times (May 17, 2012),
18 <https://archive.nytimes.com/dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/>
[<https://perma.cc/6GQV-TEY8>].

19 ³⁰² See Josh Constine, *Instagram hits 1 billion monthly users, up from 800M in September*,
20 TechCrunch (June 20, 2018), <https://techcrunch.com/2018/06/20/instagram-1-billion-users/>
(showing meteoric rise in monthly active users over period and reporting year-over-year revenue
21 increase of 70% from 2017–2018).

22 ³⁰³ Merkle, *Merkle Releases Its Q2 2018 Digital Marketing Report*, Bloomberg (July 19, 2018),
23 [https://www.bloomberg.com/press-releases/2018-07-19/merkle-releases-its-q2-2018-digital-](https://www.bloomberg.com/press-releases/2018-07-19/merkle-releases-its-q2-2018-digital-marketing-report)
marketing-report [<https://perma.cc/9CGM-UDA6>].

24 ³⁰⁴ *Id.*

25 ³⁰⁵ Sara Lebow, *For the first time, Instagram contributes over half of Facebook’s US ad revenues*,
Insider Intel. (Nov. 1, 2021), [https://www.emarketer.com/content/instagram-contributes-over-half-](https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues)
of-facebook-us-ad-revenues.

26 ³⁰⁶ Salvador Rodriguez, *Mark Zuckerberg is adamant that Instagram should not be broken off from*
27 *Facebook*, CNBC (Oct. 30, 2019), [https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-](https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html)
that-instagram-should-remain-with-facebook.html.

1 reporting that they use it “almost constantly.”³⁰⁷ Instagram’s young user base has become even
2 more important to Meta as the number of teens using Facebook has decreased over time.³⁰⁸

3 239. Facebook’s and Instagram’s success, and the riches they have generated for Meta,
4 have come at an unconscionable cost in human suffering.

5 240. In September 2021, *The Wall Street Journal* began publishing internal documents
6 leaked by former Facebook product manager, Frances Haugen.³⁰⁹ The documents are disturbing.
7 They reveal that, according to Meta’s researchers, 13.5% of U.K. girls reported that Instagram
8 made suicidal thoughts worse, and 17% of teen girls reported worsening eating disorders after
9 using Instagram.³¹⁰ Over 40% of Instagram users who reported feeling “unattractive” said that
10 feeling began while using Instagram,³¹¹ and 32% of teen girls who already felt bad about their
11 bodies felt even worse because of the app.³¹²

13 ³⁰⁷ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
14 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>;
15 *see also* Erinn Murphy *et al.*, *Fall 2021: Taking Stock with Teens* at 19, Piper Sandler (2021),
16 [https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-
0e3adfcdbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcdbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top) (81% of teens use Instagram at least once a month).

17 ³⁰⁸ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
18 Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
[<https://perma.cc/SSL6-QUN2>].

19 ³⁰⁹ *See the facebook files: A Wall Street Journal investigation*, Wall St. J.,
20 <https://www.wsj.com/articles/the-facebook-files-11631713039?mod=bigtop-breadcrumb> (collection
of *The Wall Street Journal* articles).

21 ³¹⁰ Morgan Keith, *Facebook’s internal research found its Instagram platform contributes to eating
22 disorders and suicidal thoughts in teenage girls, whistleblower says*, Bus. Insider (Oct. 3, 2021),
[https://www.businessinsider.com/facebook-knows-data-instagram-eating-disorders-suicidal-
thoughts-whistleblower-2021-10](https://www.businessinsider.com/facebook-knows-data-instagram-eating-disorders-suicidal-thoughts-whistleblower-2021-10).

23 ³¹¹ Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls, Company Documents
24 Show*, Wall St. J. (Sept. 14, 2021), [https://www.wsj.com/articles/facebook-knows-instagram-is-
toxic-for-teen-girls-company-documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739) [<https://perma.cc/6XL4-TGJ8>]; *Teen
25 Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 9,
Wall St. J. (Mar. 26, 2020), [https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-
social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf).

27 ³¹² Billy Perrigo, *Instagram Makes Teen Girls Hate Themselves. Is That a Bug or a Feature?*, Time
28 (Sept. 16, 2021), <https://time.com/6098771/instagram-body-image-teen-girls/>.

1 241. Internal Meta presentations from 2019 and 2020 were transparent in their
2 conclusions about the harms caused by Instagram: ““We make body image issues worse for one in
3 three teen girls[;]”³¹³ “Mental health outcomes related to this can be severe[;]”³¹⁴ and “Aspects of
4 Instagram exacerbate each other to create a perfect storm.”³¹⁵

5 242. Haugen’s revelations made clear to the public what Meta has long known: In an
6 effort to addict kids and drive increased usage, Meta’s platforms exploit the neurobiology of
7 developing brains, and all the insecurities, status anxieties, and beauty comparisons that come
8 along with it. In a bid for higher profits, Meta ignored or actively concealed the harms resulting
9 from its addiction-based business model, which are widespread, serious, long-term, and in tragic
10 instances, fatal.

11 **d. Modifications of Instagram’s product features over time.**

12 243. In its earliest form, Instagram was a photo-sharing app. Users could post still
13 images—enhanced by the product’s suite of built-in photo filters—“follow” other users, and
14 “Like” or comment on posts by other users, all in a centralized chronological feed. Instagram also
15 allowed users to see their friends’ activity—such as liking or commenting on a post, or following
16 other accounts—on the app, through its “Following” tab.

17 244. In January 2011, Instagram added hashtags, which allowed users to group together
18 posts about particular topics.³¹⁶

19 245. Since acquiring Instagram, Meta has introduced to the product a host of additional
20

21 ³¹³ Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls*, *Company Documents*
22 *Show*, Wall St. J. (Sept. 14, 2021), <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739> [<https://perma.cc/6XL4-TGJ8>].

23 ³¹⁴ *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.*
24 at 34, Wall St. J. (Sept. 29, 2021), <https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf>.

25 ³¹⁵ Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls*, *Company Documents*
26 *Show*, Wall St. J. (Sept. 14, 2021), <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739> [<https://perma.cc/6XL4-TGJ8>].

27 ³¹⁶ Jonah Madrigallos, *Diving Deep into the Science of the Instagram Algorithm*, Signalitics (Sept.
28 1, 2021), <https://www.signalitics.ai/instagram-algorithm/>.

1 features to drive pre-teen and teenage engagement and, in doing so, increase advertising revenues.

2 246. In June 2013, in addition to the still, filtered images for which the product was
3 known, Instagram began to support videos of up to 15 seconds.³¹⁷ This feature also included 13
4 new, specially created filters that could be applied to the videos.³¹⁸ At the time, this feature
5 satisfied what some characterized as the “years-long search for an ‘Instagram for video,’”³¹⁹ and
6 allowed Instagram to compete with a popular video-sharing product at the time, Vine. It also
7 allowed users posting videos to select their “favorite” scene from the video to be displayed as the
8 cover image on video posts. According to Systrom, this ensured that user’s videos were “beautiful
9 even when they’re not playing.”³²⁰ Despite this, Instagram remained largely a photo-sharing app.

10 247. In December 2013, Meta added Instagram Direct, a feature that allows users to send
11 messages or posts to specific people directly from the app.³²¹ This function allowed Instagram to
12 compete against messaging platforms like Snapchat that were gaining popularity among teens and
13 pre-teens.

14 248. In June 2015, Meta opened Instagram to all advertisers, weaving advertisements into
15 users’ Feeds.³²²

16 249. In March 2016, Meta did away with Instagram’s chronological feed and
17 implemented engagement-based ranking algorithms.³²³ Now, upon opening the app, users would

18 ³¹⁷ Colleen Taylor, *Instagram Launches 15-Second Video Sharing Feature, With 13 Filters And*
19 *Editing*, TechCrunch (June 20, 2013), [https://techcrunch.com/2013/06/20/facebook-instagram-](https://techcrunch.com/2013/06/20/facebook-instagram-video/)
20 [video/](https://techcrunch.com/2013/06/20/facebook-instagram-video/).

21 ³¹⁸ *Id.*

22 ³¹⁹ *Id.*

23 ³²⁰ Kevin Systrom, *Introducing Video on Instagram*, Instagram (June 20, 2013),
<https://about.instagram.com/blog/announcements/introducing-video-on-instagram>.

24 ³²¹ Jordan Crook, *Instagram Introduces Instagram Direct*, TechCrunch (Dec. 12, 2013),
<https://techcrunch.com/2013/12/12/instagram-messaging/>.

25 ³²² Vindu Goel & Sydney Ember, *Instagram to Open its Photo Feed to Ads*, N.Y. Times (June 2,
26 2015), [https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-](https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-advertising.html)
[advertising.html](https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-advertising.html) [<https://perma.cc/RMQ9-KSCJ>].

27 ³²³ Alex Heath, *Instagram is about to go through its most radical change ever*, Bus. Insider (Mar. 15,
28 2016), <https://www.businessinsider.com/instagram-to-introduce-algorithmic-timeline-2016-3>.

1 no longer see posts from people they followed in the order they were posted; instead, they would
2 encounter an algorithmic feed, like the one employed on Meta’s other product, Facebook. At the
3 time, Instagram said that the new algorithmic feed would rank the order of posts in users’ feeds
4 “based on the likelihood [that users would] be interested in the [post], [their] relationship with the
5 person posting and the timeliness of the post[.]”³²⁴

6 250. In February 2016, with the popularity of video rising on Instagram, Meta added view
7 counts to videos, allowing users to see how many times users had viewed their posts.³²⁵ Later that
8 year, in December 2016, Instagram added the ability to “Like” comments to posts (symbolized by
9 a heart emoji).³²⁶ Both features became a source of additional motivation by users to seek social
10 acceptance and validation.

11 251. In August 2016, Meta introduced Instagram Stories,³²⁷ another feature intended to
12 compete against Snapchat for the youth market. Systrom has admitted that the feature was copied
13 from a Snapchat feature popular with children called “Snapchat Stories.”³²⁸ Later that year, in
14 November 2016, Meta introduced Instagram Live,³²⁹ designed to compete with both Snapchat’s
15 ephemeral, disappearing posts, and the live-streamed videos of a then-popular product called
16 Periscope. Instagram Live permitted users to live stream video, which disappeared as soon as the
17 live stream stopped.

18 ³²⁴ *Id.*

19 ³²⁵ Michael Zhang, *Instagram is Adding View Counts to Your Videos*, PetaPixel (Feb. 11, 2016),
20 <https://petapixel.com/2016/02/11/instagram-adding-view-counts-videos/>.

21 ³²⁶ Hayley Tsukayama, *Instagram will soon let you like comments – or even turn them off*
22 *completely*, Wash. Post (Dec. 6, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/12/06/instagram-will-soon-let-you-like-comments-or-even-turn-them-off-completely/> [https://perma.cc/6ALQ-ZSE5].

23 ³²⁷ *Introducing Instagram Stories*, Instagram (Aug. 2, 2016),
24 <https://about.instagram.com/blog/announcements/introducing-instagram-stories#:~:text=Today%2C%20we're%20introducing%20Instagram,a%20slideshow%20format%3A%20your%20story.>

25 ³²⁸ Rachel Kraus, *Instagram Founder Admits He Blatantly Stole Stories from Snapchat*, Mashable
26 (Mar. 11, 2019), <https://mashable.com/article/kevin-systrom-instagram-stories-snapchat>.

27 ³²⁹ Josh Constine, *Instagram launches disappearing Live video and messages*, TechCrunch (Nov. 21,
28 2016), <https://techcrunch.com/2016/11/21/instagram-live/>.

1 252. Meta recognized early on that the Live feature was successful among young users. A
2 February 2017 internal memo noted that of the 9.2 million broadcasts per day, “35% of [Live]
3 broadcasters are teens (early and late high school).”³³⁰

4 253. In December 2016, Meta introduced a product feature that allowed users to “save”
5 posts from other users.³³¹ By tapping a bookmark icon underneath posts in their feeds, users could
6 save posts for later, in a private tab that was viewable only to the saving user.

7 254. In April 2017, Meta introduced another feature with appeal to children, an offline
8 mode that allows users to view posts and interact with Instagram even when they do not have
9 access to an internet connection,³³² for example when riding a bus to or from school or when
10 parents have disabled home internet to prevent overuse of social media by their kids.

11 255. In January 2018, Meta launched a feature allowing Instagram users to see when
12 others they had messaged with were active, or most recently active, on Instagram. This feature
13 exploits social reciprocity, which, as explained above, results in more time spent using the
14 product.

15 256. In June 2018, at the same time it announced that Instagram had grown to one billion
16 users, Meta introduced IGTV, both in the Instagram app and as a standalone product.³³³ IGTV was
17 intended to rival YouTube. IGTV allowed users to upload videos up to one-hour long.

18 257. In September 2018, Systrom and Instagram co-founder Mike Krieger resigned from
19 Instagram, and Facebook named Adam Mosseri, a 10-year veteran of Facebook, as Instagram’s
20 new CEO.

21 258. Under Mosseri’s leadership, Instagram aggressively focused on acquiring and
22 maximizing the engagement of young users. In 2018, Instagram allotted most of its global annual

23 ³³⁰ MDL AG Compl. at 21, ¶ 106.

24 ³³¹ Lisa Eadicicco, *Instagram Just Added a New Feature that Lets You Save Other Users’ Posts*,
25 Time (Dec. 14, 2016), <https://time.com/4602063/instagram-new-update-features-2016/>.

26 ³³² Josh Constine, *Instagram on Android gets offline mode*, TechCrunch (Apr. 18, 2017),
<https://techcrunch.com/2017/04/18/instagram-offline/>.

27 ³³³ Kevin Systrom, *Welcome to IGTV, our New Video App*, Instagram (June 20, 2018),
28 <https://about.instagram.com/blog/announcements/welcome-to-igtv>.

1 marketing budget to targeting 13- to 15-year-old children, a marketing demographic it calls “early
2 high school.”³³⁴ According to Meta, these users represent the platform’s “teen foothold” for its
3 “US pipeline.”³³⁵ “Youth and [t]eens are critically important to Instagram. While Instagram has
4 strong market-fit with [t]eens, we know we need to constantly ‘re-win’ this segment[.]”³³⁶ Meta
5 has expressly sought to maximize metrics like “teen time spent” on the Instagram product.³³⁷

6 259. One way Meta sought to increase its teen metrics was through its launch of “Reels”
7 in August 2020, which mimicked the format of videos on TikTok. As noted, Reels mirrors TikTok
8 by algorithmically presenting short, “full-screen” videos posted by other Instagram users. Like
9 TikTok, Reels counts and displays the number of likes, follows, comments, shares, and views of a
10 video. The following year, Meta did away with IGTV, which had allowed longer videos to be
11 posted by users in a more traditional format. In late July 2022, Mosseri announced that “more and
12 more of Instagram is going to become video over time[.]”³³⁸

13 260. Instagram creates images and GIFs for users to incorporate into their videos and
14 picture postings. Instagram has also acquired publishing rights to thousands of hours of music and
15 video, which it provides to its users to attach to the videos and pictures that they post on
16 Instagram.

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20 ³³⁴Sheera Frenkel *et al.*, *Instagram Struggles With Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
Times (Oct. 16, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
21 [<https://perma.cc/SSL6-QUN2>].

22 ³³⁵ *Id.*

23 ³³⁶ META3047MDL-003-00030070 at META3047MDL-003-00030071.

24 ³³⁷ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
25 [<https://perma.cc/SSL6-QUN2>].

26 ³³⁸ Marisa Dellatto, *Instagram Exec Defends Shift to Video Despite Complaints from Creators like*
27 *Kylie Jenner*, Forbes (July 26, 2022),
[https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-](https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e)
28 [despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e](https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e) [[https://perma.cc/AZH9-](https://perma.cc/AZH9-MEMX)
MEMX].

1 **2. Meta intentionally encourages youth to use its platforms and then leverages that**
2 **usage to increase revenue.**

3 261. Facebook and Instagram owe their success to their design choices, including their
4 underlying computer code and algorithms, and to Meta’s failure to warn the public, particularly
5 youth, that the platforms present serious safety risks. Meta’s tortious conduct begins before a user
6 has viewed, let alone posted, any content.

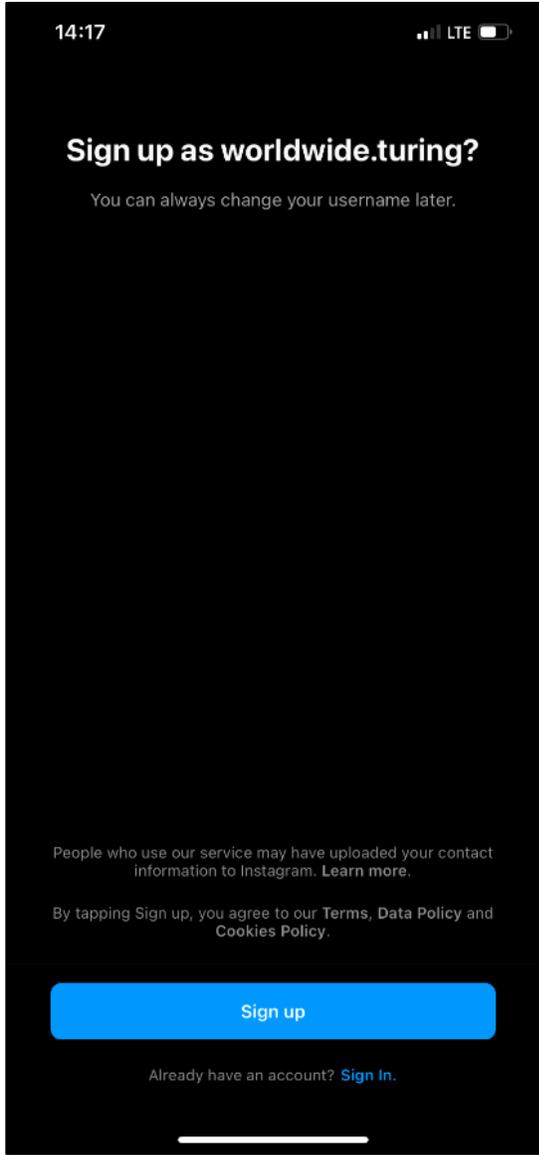
7 262. Meta describes the Instagram product as a “mobile-first experience.”³³⁹ Indeed, the
8 great majority of Instagram users in the U.S. access Instagram through a mobile application for
9 either the iOS or Android operating systems.

10 263. To use the Facebook or Instagram app, one must first obtain it. On a mobile device,
11 this is accomplished by visiting a store from which the product can be downloaded—either the
12 Apple App Store (for iPhone users) or the Google Play Store (for Android users). Once installed
13 onto an individual’s smartphone, they can open the app. They are then asked to create a new
14 account by entering an email address, adding a name, and creating a username and password.

15 264. A prospective Instagram or Facebook user is then invited to press a colorful “Sign
16 up” button. In small print above this button, the user is informed that “[b]y tapping Sign up, you
17 agree to our Terms, Data Policy and Cookies Policy.” The text of those policies is not presented
18 on the sign-up page. While the words “Terms,” “Data Policy,” and “Cookies Policy” are slightly
19 bolded, the user is not informed that they can or should click on them, or otherwise told how they
20 can access the policies.

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27 ³³⁹ Yorgos Askalidis, *Launching Instagram Messaging on Desktop*, Instagram (Sept. 25, 2020),
28 <https://about.instagram.com/blog/engineering/launching-instagram-messaging-on-desktop>.

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265. Meta’s Data Policy (rebranded as a “Privacy Policy” in 2022), which applies to a range of Meta apps, including Facebook and Instagram,³⁴⁰ indicates Meta collects a breathtaking amount of data from the users of its platforms, including, among others:

- a. “[c]ontent you create, like posts, comments or audio”;
- b. “[c]ontent you provide through our camera feature or your camera roll settings, or

³⁴⁰ *Privacy Policy*, Meta (June 15, 2023), <https://mbasic.facebook.com/privacy/policy/printable/#annotation-1>.

- 1 through our voice-enabled features”;
- 2 c. “information you’ve shared with us through device settings, like GPS location,
3 camera access, photos and related metadata”;
- 4 d. “[m]essages you send and receive, including their content”;
- 5 e. “[m]etadata about content and messages”;
- 6 f. “[t]ypes of content, including ads, you view or interact with, and how you interact
7 with it”;
- 8 g. “[t]he time, frequency and duration of your activities on our Products”;
- 9 h. “your contacts’ information, such as their name and email address or phone number,
10 if you choose to upload or import it from a device, like by syncing an address book”;
- 11 i. information about “[w]hat you’re doing on your device, like whether our app is in the
12 foreground or if your mouse is moving”;
- 13 j. “device signals from different operating systems[,]” including “things like nearby
14 Bluetooth or Wi-Fi connections”;
- 15 k. “[i]nformation about the network you connect your device to and your connection,
16 including your IP address” (including the “name of your mobile operator or internet
17 service provider (ISP)[,] . . . [l]anguage[,] . . . [t]ime zone[,] . . . [m]obile phone
18 number[,] . . . [c]onnection and download speed”),
- 19 l. “[i]nformation about other devices that are nearby or on your network”,
- 20 m. “Wi-Fi hotspots you connect to using our Products”;
- 21 n. information from third parties, including, “[m]arketing and advertising vendors and
22 data providers, who have the rights to provide us with your information.”

23 266. While the Data Policy indicates the scope of user information collected by Meta
24 through Facebook and Instagram, it is far less forthcoming about the purposes for which this data
25 is collected, and its consequences for younger users.

26 267. The Data Policy presents those goals as benign and even positive for its users—“to
27 provide a personalized experience to you” and to “[m]ake suggestions for you (such as people you
28 may know, groups or events that you may be interested in or topics that you may want to

1 follow)[.]”³⁴¹

2 268. The Data Policy does not inform users that the more time individuals spend using
3 Facebook and Instagram, the more ads Meta can deliver and the more money it can make; or that
4 the more time users spend on Facebook and Instagram, the more Meta learns about them, and the
5 more it can sell to advertisers the ability to micro-target highly personalized ads.³⁴²

6 269. Meta monetizes its users and their data by selling ad placements to marketers. Meta
7 generated \$69.7 billion from advertising in 2019, more than 98% of its total revenue for the
8 year.³⁴³

9 270. Given its business model, Meta has every incentive to—and knowingly does—addict
10 users to Facebook and Instagram. It accomplishes this through the algorithms that power its apps,
11 which are designed to induce compulsive and continuous scrolling for hours on end, operating in
12 conjunction with the other dangerous features described throughout this Complaint.³⁴⁴

13 271. Indeed, even Mark Zuckerberg confirmed Meta’s core business model relies on
14

15 ³⁴¹ *Id.*

16 ³⁴² Nor does it inform users that Meta previously allowed third-party apps to harvest from Facebook
17 “vast quantities of highly sensitive user and friends permissions.” Order Granting in Part Plaintiffs’
18 Motion for Sanctions at 9, *In Re: Facebook, Inc. Consumer Privacy User Profile Litigation*, No. 18-
19 md-02843-VC (N.D. Cal. Feb. 9, 2023), ECF No. 1104. This has included an app called Sync.Me,
20 which—according to Meta’s internal investigative documents—“had access to many ‘heavyweight’
21 permissions, including the user’s entire newsfeed, friends’ likes, friends’ statuses, and friends’
22 hometowns.” *Id.* It has included Microstrategy, Inc., which accessed data from “16 to 20 million”
23 Facebook users, despite only being installed by 50,000 people. *Id.* And it has included one Yahoo
24 app that made “‘billions of requests’” for Facebook user information, including “personal
25 information about those users’ friends, including the friends’ education histories, work histories,
26 religions, politics, ‘about me’ sections, relationship details, and check-in posts.” *Id.* at 9–10.

27 ³⁴³ Rishi Iyengar, *Here’s how big Facebook’s ad business really is*, CNN (July 1, 2020),
28 <https://www.cnn.com/2020/06/30/tech/facebook-ad-business-boycott>.

³⁴⁴ See Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and
Freemium Games against the Background of Psychological and Economic Theories* at 5, 16(14) *Int’l
J. Env’t Rsch. & Pub. Health* 2612 (2019), [https://www.ncbi.nlm.nih.gov/pmc/articles/
PMC6679162/pdf/ijerph-16-02612.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-02612.pdf) (“One technique used to prolong usage time in this context is
the endless scrolling/streaming feature.”); see generally, Ludmila Lupinacci, *‘Absentmindedly
scrolling through nothing’: liveness and compulsory continuous connectedness in social media*, 43
Media, Culture & Soc’y 273 (2021), [https://journals.sagepub.com/doi/epdf/10.1177/
0163443720939454](https://journals.sagepub.com/doi/epdf/10.1177/0163443720939454) (describing the ways that users use and experience social media apps).

1 increasing the amount of time its users stay on their platforms. Zuckerberg wrote he hoped to see
2 time spent on Instagram increase by 10% between 2016 and 2021.³⁴⁵

3 272. As Meta noted in its 2021 Annual Report to the SEC, “[t]he size of our user base and
4 our users’ level of engagement across our products are critical to our success.”³⁴⁶ It noted that
5 factors affecting Meta’s revenue generation include: (1) “user engagement, including time spent
6 on [Meta’s] products”; (2) increasing “user access to and engagement with [Meta’s] products”; (3)
7 Meta’s ability “to maintain or increase the quantity or quality of ads shown to users”; (4)
8 maintaining traffic to monetized features like the “Feed” and “Stories”; (5) the “effectiveness of
9 [Meta’s] ad targeting”; and (6) the degree to which users engage with Meta’s ads.³⁴⁷

10 273. Accordingly, Meta constantly collects and reviews data on young users’ activity on
11 its platforms. As a Director of Product Management at Instagram stated in January 2020, he was
12 “focused on getting a very clear understanding of our current US [Daily Active People] and
13 [Monthly Active People] growth situation, opportunities, and challenges because 1) US Teens are
14 our #1 cohort for both long-term growth of [Instagram] and [Facebook] Family
15 incremenatality.”³⁴⁸

16 274. Meta’s Data Policy contains no warnings whatsoever that use of its platforms at the
17 intensity and frequency targeted by Meta creates known risks of mental, emotional, and behavioral
18 problems, nor does it mention the increased likelihood of injury for children, Instagram’s key
19 audience.

20 275. Instagram’s collection and utilization of user data begins the instant a user presses
21 “Sign Up.” At that point, Instagram prompts a new user to share a substantial amount of personal
22 data. First, Instagram asks the user to share their personal contacts, either by syncing contacts
23 from their phone and/or syncing their “Friends” from Facebook—“We’ll use your contacts to help

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³⁴⁵ MDL AG Compl. at 12, ¶ 57.

25 ³⁴⁶ Meta Platforms, Inc., Annual Report (Form 10-K) at 13 (Feb. 2, 2022),
26 <https://www.sec.gov/Archives/edgar/data/1326801/000132680122000018/fb-20211231.htm>.

27 ³⁴⁷ *Id.* at 15–16.

28 ³⁴⁸ MDL AG Compl. at 14, ¶ 69.

1 you find your friends and help them find you.” Next, Instagram asks the new user to upload a
2 photo of themselves. After that, Instagram asks the user to “Choose your interests” to “Get started
3 on Instagram with account recommendations tailored to you.” Finally, Instagram invites the new
4 user to “Follow accounts to see their photos and videos in your feed,” offering a variety of
5 recommendations. After sign-up is completed, Instagram prompts the new user to post either a
6 photo or a short video.

7 276. Meta’s collection and utilization of user data continues unabated as a new user
8 begins to interact with its platforms. Meta’s tracking of behavioral data—ranging from what the
9 user looks at, to how long they hover over certain images, to what advertisements they click on or
10 ignore—helps Meta build out a comprehensive and unique enticement, tailor-made to
11 inconspicuously lure each respective user. As the user continues to use the product, Meta’s
12 algorithm works silently in the background to refine this enticement, by continuously monitoring
13 and measuring patterns in the user’s behavior. Meta’s algorithm is sophisticated enough that it can
14 leverage existing data to draw educated inferences about even the user behavior it does not track
15 firsthand. Meta’s comprehensive data collection allows it to target and influence its users to
16 engineer their protracted “engagement” with its platforms.

17 277. Meta’s collection and analysis of user data allows it to assemble virtual dossiers on
18 its users, covering hundreds if not thousands of user-specific data segments. This data collection
19 and analysis allows advertisers to micro-target advertising to very specific categories of users,
20 who can be segregated into pools or lists using Meta’s data segments. Only a fraction of these data
21 segments come from content knowingly designated by users for publication or explicitly provided
22 by users in their account profiles. Many of these data segments are collected by Meta through
23 surveillance of each user’s activity on the platform and off the platform, including behavioral
24 surveillance that users are not even aware of, like navigation paths, watch time, and hover time.
25 As Meta’s user database grows, it leverages that data to manipulate users into spending more time
26 on the platforms. As users spend more time on the platforms, Meta can extract more and more
27 detailed information. The more detailed information Meta can extract from users, the more money
28 it makes.

1 278. Currently, advertisers can target Instagram and Facebook ads to young people based
2 on age, gender, and location.³⁴⁹ According to U.S.-based non-profit Fairplay, Meta did not
3 actually cease collecting data from teens for advertising in July 2021, as Meta has claimed.³⁵⁰

4 279. Meta clearly understands the revenue and growth potential presented by its youngest
5 users, and it is desperate to retain them. In an internal email from August 2017, a Meta employee
6 expressed one of Meta’s “[l]onger-term [f]ocus [a]reas” was how to “get teens to share their
7 location with us so we can leverage that data for awesome product experiences and also analytics
8 around high schools.³⁵¹ Further, documents obtained by *The New York Times* indicate that, since
9 2018, almost all Instagram’s \$390 million global marketing budget has gone towards showing ads
10 to teenagers.³⁵²

11 280. Meta has also acknowledged the importance of its young users by quantifying their
12 value to the company. An internal email from Septemeber 2018 characterized Meta’s youth users
13 in terms of their “Lifetime Value (LTV)” to Meta, defined as the cumulative total profit expected
14 from a user.³⁵³ The email identified “[t]he lifetime value of a 13 y/o teen is roughly \$270 per teen”
15 and that “[t]his number is core to making decisions about [Meta’s] business” because “you do not
16 want to spend more than the LTV of the user.”³⁵⁴

17 281. Despite its research to the contrary, Meta has denied it places a monetary value on
18 young users. At a Senate subcommittee hearing on September 30, 2021, Senator Amy Klobuchar
19 asked Meta executive Antigone Davis what Meta believed the lifetime monetary value of young

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21 ³⁴⁹ Andrea Vittorio, *Meta’s Ad-Targeting to Teens Draws Advocacy Group Opposition*, Bloomberg
22 (Nov. 16, 2021), <https://news.bloomberglaw.com/privacy-and-data-security/metad-targeting-to-teens-draws-advocacy-group-opposition>.

23 ³⁵⁰ *Id.*

24 ³⁵¹ Complaint and Jury Demand (“Mass. AG Compl.”) at 19, ¶ 83, *Commw. Mass. v. Meta Platforms, Inc.*, No. 2384cv02397-BLS1 (Mass. Super. Ct. Nov. 6, 2023), ECF No. 1.

25 ³⁵² Sheera Frenkel *et al.*, *Instagram Struggles With Fears of Losing Its ‘Pipeline’: Young Users* N.Y.
26 Times (Oct. 16, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
27 [<https://perma.cc/SSL6-QUN2>].

28 ³⁵³ MDL AG Compl. at 19, ¶ 84.

³⁵⁴ *Id.*

1 users was. Davis responded, “[t]hat’s just not the way we think about [it].”³⁵⁵ Davis also denied
2 that Meta “considered the profit value of developing products when [Meta] make[s] their
3 decisions of how those products look,” testifying that this would be a “terrible business model.”³⁵⁶

4 282. Before the rise of Instagram, Facebook was the social media product by which Meta
5 targeted young users. Until recently, this targeting was devastatingly effective. In January 2014,
6 90% of U.S. teens used Facebook monthly; as late as January 2016, 68% did.³⁵⁷

7 283. While the number of teen Facebook users has declined in recent years, Facebook
8 remains critical to Meta’s strategy towards young users. Meta views Facebook as the nexus of
9 teen users’ lives on social media, “where all social circles intersect,” and as filling a similar role
10 for such users as the career-focused social media product LinkedIn fills for adults.³⁵⁸ According to
11 the summary of a 2018 meeting, Meta’s expressed goal was to have users “move through” Meta’s
12 platforms “as they grow, i.e. Messenger Kids → Instagram → Facebook.”³⁵⁹

13 284. To create this cycle, Meta embarked on a “major investment in youth,” researching
14 and pursuing platforms targeted at kids as young as six.³⁶⁰ The centerpiece of these efforts is
15 Messenger Kids.³⁶¹ In 2019, Meta conducted at least two research projects on growing Messenger
16 Kids. One study explored how to use “Playdates as a Growth Lever for Messenger Kids.”³⁶²
17 During this study, Meta sought to understand better how playdates might be an area to increase
18 usage among kids by interviewing parents of active users.³⁶³ Investigators suggested there was an

19 _____
20 ³⁵⁵ MDL AG Compl. at 19, ¶ 85.

21 ³⁵⁶ *Id.*

22 ³⁵⁷ META3047MDL-003-00171899 at META3047MDL-003-00171904.

23 ³⁵⁸ *Id.* at META3047MDL-003-00171909.

24 ³⁵⁹ META3047MDL-003-00003731 at META3047MDL-003-00003732.

25 ³⁶⁰ Haugen_00017238 at Haugen_00017238.

26 ³⁶¹ Nick Statt, *Facebook launches a version of Messenger for young children*, Verge (Dec. 4, 2017),
27 [https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-
28 preview.](https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview)

³⁶² Haugen_00023087 at Haugen_00023087.

³⁶³ *Id.* at Haugen_00023088.

1 opportunity to “brainstorm features and/or prompts encouraging use of the app, prior and after
2 playdates to improve [sic] retention and active threads.”³⁶⁴ Later that year, they released a finding
3 from a second investigation of parents and children who used Messenger Kids and those who did
4 not.³⁶⁵ To drive Messenger Kids growth, the study recommended “encourag[ing] more [kid-to-
5 kid] connections in [Messenger Kids]” by “surfac[ing] and develop[ing] additional in-app
6 activities that involve others,” while emphasizing to parents the “play-based messaging” and the
7 “play aspect of [Messenger Kids] — camera filters, games, filters via notif[ication]s and QPs.”³⁶⁶
8 These are many of the same features found in Instagram.

9 285. Meta was also eager to market its platforms to tweens—users aged 10-12. Although
10 Meta employees publicly denied using children as “guinea pigs” to develop product features,
11 internally Meta was intensely interested in children’s use of their apps.³⁶⁷ Meta conducted
12 research projects, with titles such as, *Tweens JTBD Survey*;³⁶⁸ and *Exploring Tweens’ Social
13 Media Habits*.³⁶⁹ In the latter study, Meta compared tween perceptions of their competitors’
14 platforms to understand “tween product needs,”³⁷⁰ noting that tweens can “connect and have fun
15 using existing apps, even though they’re not made with a 10-to-12-year-old in mind.”³⁷¹ Meta’s
16 takeaway was to “use entertainment/interests as a starting point for engagement” and to “highlight
17 fitting in.”³⁷²

18 286. In 2019, Meta conducted a series of interviews in Los Angeles and Denver with
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20 ³⁶⁴ *Id.* at Haugen_00023090.

21 ³⁶⁵ Haugen_00023066 at Haugen_00023067.

22 ³⁶⁶ *Id.* at Haugen_00023085.

23 ³⁶⁷ John Twomey, *Molly Russell inquest latest: Teenager viewed suicide videos of ‘most distressing
24 nature’*, Express (Sept. 23, 2022), [https://www.express.co.uk/news/uk/1673461/Molly-Russell-
25 inquest-latest-Teenager-suicide-videos-instagram](https://www.express.co.uk/news/uk/1673461/Molly-Russell-inquest-latest-Teenager-suicide-videos-instagram).

26 ³⁶⁸ “JTBD” appears to stand for “Jobs to Be Done.” Haugen_00024450 at Haugen_00024454.

27 ³⁶⁹ Haugen_00023849 at Haugen_00023850.

28 ³⁷⁰ *Id.* at Haugen_00023888.

³⁷¹ *Id.* at Haugen_00023886.

³⁷² *Id.* at Haugen_00023888.

1 tween friend groups, friend pairs, and individuals.³⁷³ Meta used this research to craft “product
2 recommendation[s]” to appeal to tweens, suggesting features to help “decrease friction in the
3 digital interaction funnel.”³⁷⁴ The recommendations included developing ways to “provide
4 automatic signals that indicate whether friends are available to interact,” “[e]nable tweens to
5 instrumentally signal their availability,” “[p]rovide lightweight conversation starters that tweens
6 can use to test the reciprocity of an interaction (e.g., poking, waves),” and “build in a way that
7 enables quick communication across all messaging modalities.”³⁷⁵

8 287. Meta’s interest, efforts, and success in expanding the presence of its platforms in
9 children’s lives is clear. Given the delicate, developing nature of the young brain and Meta’s
10 creation of social media platforms designed to promote repetitive, compulsive use, it is not
11 surprising that American society is now grappling with the ramifications of Meta’s growth-at-any-
12 cost approach. In a candid moment, a Software Engineer at Meta admitted that “[i]t’s not a secret
13 that we’ve often resorted to aggressive tactics in the name of growth, and we’ve been pretty
14 unapologetic about it.”³⁷⁶

15 288. Meta has studied features and designs from its other platforms to make Instagram as
16 attractive and addictive as possible to young users. Meta’s flagship product Facebook was the
17 original testing ground for many of Instagram’s addictive and otherwise harmful features, which
18 the two platforms share to this day. This feature overlap is no accident: it represents a conscious
19 strategy adopted by Meta to keep social media users hooked on its “family” of platforms for their
20 entire lives.

21 **3. Meta intentionally designed its platform to addict children and adolescents.**

22 289. Meta designed Facebook and Instagram with harmful features that users encounter at
23 every stage of interaction with the product and that lead to serious problems in NYC Plaintiffs’
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25 ³⁷³ Haugen_00024450 at Haugen_00024450.

26 ³⁷⁴ *Id.* at Haugen_00024466.

27 ³⁷⁵ *Id.*

28 ³⁷⁶ Haugen_00000934 at Haugen_00000934.

1 schools and communities. These include, but are not limited to: (a) recommendation algorithms,
2 fueled by extensive data collection, which are designed to promote use in quantities and frequency
3 harmful to youth; (b) features that prey upon children’s desire for validation and need for social
4 comparison; (c) features that are designed to create harmful loops of repetitive and excessive
5 product usage; (d) lack of effective age-verification mechanisms, despite having the ability to
6 implement them; (d) inadequate parental controls and facilitation of unsupervised use of the
7 platforms; and (e) intentionally placed obstacles to discourage cessation of use of the platforms.

8 290. Facebook and Instagram have been designed, maintained, and constantly updated by
9 one of the world’s most wealthy, powerful, and sophisticated corporations. Large teams of expert
10 data scientists, user experience (“UX”) researchers, and similar professionals have spent years
11 fine-tuning these platforms to addict users. Every aspect of the platforms’ interfaces, each layer of
12 their subsurface algorithms and systems, and each line of underlying code has been crafted by
13 brilliant minds. Every detail—the color of product icons, the placement of buttons within the
14 interface, the timing of notifications, etc.—is designed to increase the frequency and length of use
15 sessions. Therefore, it is impractical to create a comprehensive list of addictive, harm-causing
16 elements of and features in the product until in-depth discovery occurs. Many features, such as the
17 inner workings of Meta’s algorithms, are secret and unobservable to users. Discovery during this
18 litigation will reveal additional details about the addictive and harmful design of Meta’s platforms.

19 **a. Meta has failed to implement effective age-verification measures to keep**
20 **children off Facebook and Instagram.**

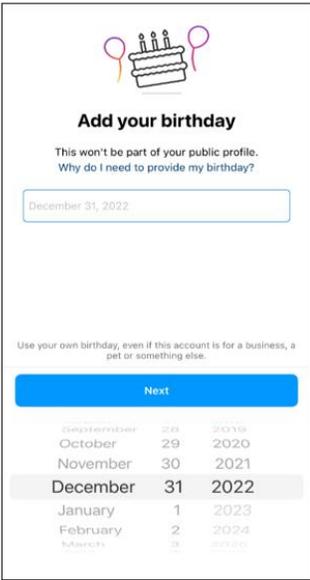
21 291. Children of all ages can use and become addicted to Meta’s platforms without any
22 effective safeguard or process prior to entry. Yet children are most vulnerable to the negative
23 impacts of Facebook and Instagram.

24 292. Meta purports to prohibit children under the age of 13 from using their platforms but,
25 at all relevant times, has lacked any reliable form of age verification to prevent underage users
26 from using their platforms. Even now, over two years after Frances Haugen testified before
27 Congress regarding the harm Meta knowingly causes to minors, users are only asked to self-report
28 their birthday when signing up for a Facebook or Instagram account:

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(Facebook, January 2023)

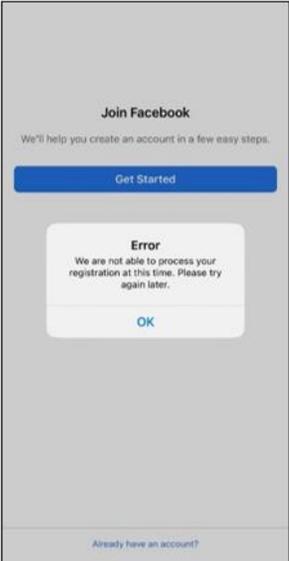


(Instagram, January 2023)

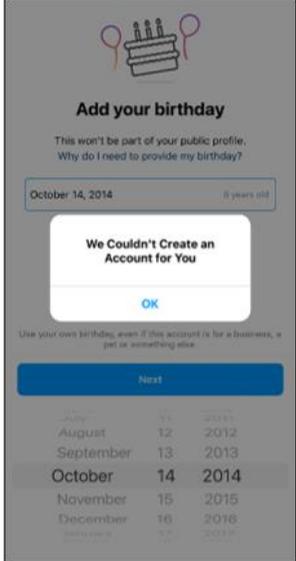
293. If users report a birthday indicating they are less than 13 years old, the platforms redirect them to the messages below:



(Facebook, January 2023)



(Facebook, January 2023)



(Instagram, January 2023)

294. After acknowledging this message, users can immediately reattempt to create an account and input an eligible birthday. When a user enters an eligible birthday, there are no restrictions to creating an account other than having it linked to a cell phone number or an email.

1 In a matter of seconds—without meaningful age verification, identity verification, or parental
2 consent—children of all ages can create a Facebook or Instagram account, then immediately
3 become subject to recommendation systems designed to induce endless interaction with
4 algorithmically tailored user experiences, all while their behavior is closely but inconspicuously
5 monitored, without actual consent, to make a progressively more addicting experience.

6 295. Meta chooses not to universally utilize available, effective, and reliable age
7 verification methods and systems used by many companies across the internet. Indeed, Meta has
8 jettisoned age-related safeguards that were initially present on the Facebook product to increase its
9 user numbers, thereby increasing its profit, to the detriment of children.

10 296. Other online platforms employ substantially more effective and reliable age
11 verification schemes before granting children access. These include, but are not limited to,
12 connecting new users to parents’ accounts, credit card verification, verification by presentation of
13 an identification card (or other government-issued document), or linking a verified undergraduate
14 or professional email, among other methods. Meta chooses not to implement any of these systems,
15 even though they are technologically feasible, used by many companies across the Internet, and
16 could be employed at relatively low cost. Indeed, Meta itself uses an age verification technique for
17 its Facebook Dating product that it claims can verify ages without identifying users—but does not
18 use the same technology at account startup for Facebook or Instagram.³⁷⁷

19 297. For most of its history, Meta has known that children under the age of 13 are using
20 its apps. This was clearly evidenced by, for example, posted photos of elementary school age
21 users. Yet Meta continued to promote and usher Facebook and Instagram to children. As long as a
22 new user simply clicked a box confirming that they were at least 13 years old, Meta asked no
23 questions, engaged in zero follow-up, and let the user access the platforms indefinitely. This did
24 not go unnoticed by certain of its employees who criticized the company’s policy: “[I]f we
25 collected age on [Instagram] we could age-gate [suicide and self-injury (“SSI”)] content. . . and if
26

27 ³⁷⁷ Erica Finkle, *Bringing Age Verification to Facebook Dating*, Meta (Dec. 5, 2022),
28 <https://about.fb.com/news/2022/12/facebook-dating-age-verification/>.

1 we used age classifiers we could detect under 13s and kick them off the platform[.]”³⁷⁸

2 298. Indeed, Meta did not ask for the age of new Instagram users until December 2019,
3 after Instagram had been on the market for more than seven years.³⁷⁹ Even then, Meta did not ask
4 *existing* users to disclose their ages, effectively grandfathering in underage users. Indeed, an
5 internal document confirms that, in April 2020, Meta had an age for only approximately 55% of
6 its users,³⁸⁰ which Meta did not attempt to correct until August 30, 2021. Meta did not begin
7 requiring age verification for users who attempt to change their age from under to over 18 until
8 2022.³⁸¹

9 299. There can be no serious debate about whether Meta has more effective age
10 verification tools at its disposal. Meta has internal age identification models, such as the
11 “teen_non_teen” model or the “dim_ig_age_prediction_adult_classifier” that can estimate a user’s
12 age.³⁸² Although tools like this could be used to identify when a user is under 13 (or, for that
13 matter, if a user is a teenager and should therefore be safeguarded from particularly injurious
14 aspects of Meta’s platforms), Meta does not use this safeguard.³⁸³

15 300. Perversely, Meta does employ age verification on Instagram—but only when a user
16 self-reports they are *younger* than 13. In that case, Meta provides a user with what amounts to an

17 _____
18 ³⁷⁸ META3047MDL-003-00086015 at META3047MDL-003-00086015.

19 ³⁷⁹ META3047MDL-003-00157020 at META3047MDL-003-00157020 (“[W]e have very limited
age information on [Instagram] (we only started collecting age in December at registration).”).

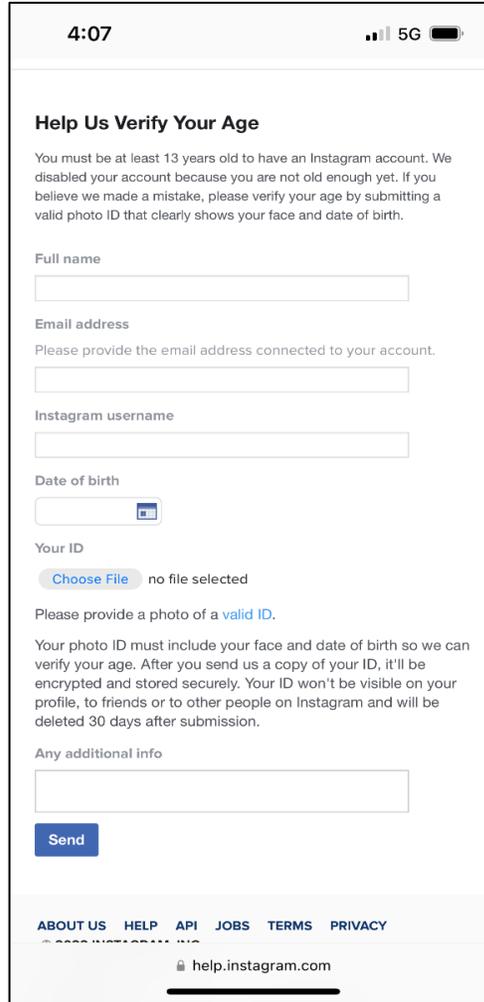
20 ³⁸⁰ META3047MDL-003-00042548 at META3047MDL-003-00042551–META3047MDL-003-
00042552.

21 ³⁸¹ Instagram, *Introducing New Ways to Verify Age on Instagram*, Meta (June 23, 2022),
22 <https://about.fb.com/news/2022/06/new-ways-to-verify-age-on-instagram/>. Meta explained the
23 choice of age by saying that they provide users under 18 with an experience that is appropriate for
24 their age, including “preventing unwanted contact from adults they don’t know[.]” However, as
described herein, each week hundreds of thousands of children are inappropriately contacted by
adults on Instagram.

25 ³⁸² Haugen_00003463 at Haugen_00003463–Haugen_00003465; *see also* Ibrahim Mousa Al-Zuabi
26 *et al.*, *Predicting customer’s gender and age depending on mobile phone data*, 6 J. Big Data 18 (Feb.
27 19, 2029), <https://journalofbigdata.springeropen.com/counter/pdf/10.1186/s40537-019-0180-9.pdf>
(discussing generally how a similar age prediction algorithm works).

28 ³⁸³ Haugen_00003463 at Haugen_00003463–Haugen_00003465.

1 appeal right: “[I]f you believe we made a mistake, please verify your age by submitting a valid
2 photo ID that clearly shows your face and date of birth.”



301. At best, this reflects a completely upside-down view of Meta’s duty of care, using age verification to screen *in* minor users but not to screen them *out*. At worst, Meta’s “are you sure you’re really under 13” question invites pre-teens to falsify their identification to gain access to Instagram.

302. Similarly, Meta imposes unnecessary barriers to the removal of accounts created by children under 13. Since at least April 2018, Instagram and Facebook both accept reports of accounts created by children under 13.³⁸⁴ However, before an Instagram or Facebook account is

³⁸⁴ *Report an Underage User on Instagram*, Instagram, <https://help.instagram.com/contact/> (footnote continued)

1 deleted, Meta requires verification that the child is under the age of 13. For example, Instagram's
2 reporting page states:

3 If you're reporting a child's account that was made with a false date of birth, and the
4 child's age can be reasonably verified as under 13, we'll delete the account. You will
5 not get confirmation that the account has been deleted, but you should no longer be
6 able to view it on Instagram. Keep in mind that complete and detailed reports
(example: providing the username of the account you're reporting) help us take
appropriate action. If the reported child's age can't reasonably be *verified as under*
13, then we may not be able to take action on the account.³⁸⁵

7 Facebook's reporting page contains almost identical language.³⁸⁶ By choosing to implement age
8 verification only before deleting accounts of users suspected to be children, but not when those
9 accounts are first created, Meta makes it more difficult to prove a user is under age 13 than it does
10 for a minor to pretend to be over 13.

11 303. It is unclear how long Meta takes to delete a reported account, if it does so at all.
12 Meta has ignored some parents' attempts to report and deactivate accounts of children under 13
13 years old.

14 304. Zuckerberg has stated that he believes children under 13 should be allowed on
15 Facebook,³⁸⁷ so Meta's lax approach to age verification appears to reflect true company policy.

16 305. Meta's approach to underage users has consistently been one of feigned ignorance.
17 On October 10, 2021, Senator Marsha Blackburn reported that a young celebrity told Instagram
18 CEO Adam Mosseri that she had been active on Instagram since she was eight. Mosseri replied
19

20 _____
21 723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-
NOLLtpctHOWkalXtfJ1ft9O09Q; *Report an Underage Child*, Facebook,
22 <https://www.facebook.com/help/contact/209046679279097>.

23 ³⁸⁵ *Report an Underage User on Instagram*, Instagram,
<https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctHOWkalXtfJ1ft9O09Q> (emphasis added).

24 ³⁸⁶ *Report an Underage Child*, Facebook, <https://www.facebook.com/help/contact/209046679279097>.

25 ³⁸⁷ Kashmir Hill, *Mark Zuckerberg Is Wrong About Kids Under 13 Not Being Allowed on Facebook*,
26 Forbes (May 20, 2011), <https://www.forbes.com/sites/kashmirhill/2011/05/20/mark-zuckerberg-is-wrong-about-kids-under-13-not-being-allowed-on-facebook/?sh=2ea85e825506>
27 [<https://perma.cc/6TZX-EKE6>].
28

1 that he “didn’t want to know that.”³⁸⁸

2 306. But Meta *does* know that its age-verification protocols are inadequate to keep minors
3 off Facebook and Instagram. According to a May 2011 *ABC News* report, “about 7.5 million
4 [Facebook] users in the U.S. are under the age of 13, and about 5 million are under the age of
5 10[.]”³⁸⁹ Meta knows through retrospective cohort analyses that “up to 10 to 15% of even 10-year-
6 olds in a given cohort may be on Facebook or Instagram.”³⁹⁰

7 307. Meta knows that its chosen method of registration does not adequately protect minor
8 users from reporting inaccurate and implausible age information. As one product engineer
9 cautioned while analyzing the age of Facebook users, “Don’t believe anything in the stated age
10 graph for under 30. They are all mixed up . . . We have way more people who say they are born in
11 the early 90s than exist in the population.”³⁹¹

12 308. Meta’s internal studies confirm its knowledge that kids, tweens, and teens use its
13 platforms. In one study, Meta researched children as young as seven and found that, in the fifth
14 grade, “social media becomes a part of their digital diets.”³⁹² Moreover, they identified that 24%
15 of children ages 7-9 and 55% of tweens ages 10-12 have at least one social media account,³⁹³ and
16 specifically stated that Instagram’s perceived user base included middle schoolers.³⁹⁴

17
18 ³⁸⁸ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
19 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021),*
20 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

21 ³⁸⁹ Ki Mae Heussner, *Underage Facebook Members: 7.5 Million Users Under Age 13*, *ABC News*
22 (May 9, 2011), <https://abcnews.go.com/Technology/underage-facebook-members-75-million-users-age-13/story?id=13565619>.

23 ³⁹⁰ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
24 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021),*
25 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

26 ³⁹¹ Haugen_00012303 at Haugen_00012314.

27 ³⁹² Haugen_00023849 at Haugen_00023855; Haugen_00023849 at Haugen_00023858910.

28 ³⁹³ *Id.* at Haugen_00023866.

³⁹⁴ *Id.* at Haugen_00023879.

1 309. Another internal post reveals Meta’s knowledge of the widespread use of Instagram
2 by preteens, as well as its targeting of children under the age of 13. In a study from around
3 January 2021: *The Role of the Teen in Shaping a Household’s Experience of Instagram*, Meta
4 expressed a desire to utilize teenagers as the doorway into capturing an entire household of users,
5 including children under age 13.³⁹⁵ The study explains that teens can be used to teach their preteen
6 siblings how to join while underage, and to help them develop a habit of using and posting
7 indiscriminately.³⁹⁶ The study expresses concern that some teens may teach their preteen siblings
8 to post less, and recommends that Meta combat this by changing perceptions among teens so that
9 they will instruct their preteen siblings to use Instagram more spontaneously.³⁹⁷ Key discussion
10 points from this document include:

11 Teens strongly influenced preteens’ understanding of what and how frequently to
12 share on [Instagram], even discouraging them from sharing. . . . We need to
13 understand [Instagram] myths circulating among teens to inform comms and shift the
14 perception of sharing on [Instagram]. . . .

14 Historically, teens have been a key focus for [Instagram]. Acquiring and maintaining
15 them continues to be a priority, reflected by investment in new features like Reels.
16 Additionally, capturing the teen user cohort on [Instagram] is critical as we think
17 about Instagram’s role within the broader family of apps. . . . [Teens] are typically the
18 first within a household to join. In many cases, they’re also critical to the onboarding
19 process for parents and preteens alike. . . .

18 Older teens were [Instagram] catalysts for preteens. Most preteens became curious
19 about and wanted an [Instagram] account because of their older sibling. In some
20 cases, preteens even relied on their older sibling to create and set up their account,
21 seeking their guidance on a username, profile photo, and accounts to [f]ollow. . . . If
22 we’re looking to acquire (and retain) new users we need to recognize a teen’s
23 influence within the household to help do so, and the potential ripple effect. . . .³⁹⁸

22 310. Meta has not used its copious knowledge about preteen engagement with its
23 platforms to comply with the law. Far to the contrary, it has leveraged its research to manipulate
24 households and target preteens through their siblings.

25 ³⁹⁵ Haugen_00016728 at Haugen_00016728.

26 ³⁹⁶ *See id.* at Haugen_00016731–Haugen_00016734.

27 ³⁹⁷ *Id.* at Haugen_00016736–Haugen_00016740.

28 ³⁹⁸ *Id.* at Haugen_00016731–Haugen_00016734.

1 **b. Facebook’s and Instagram’s parental controls are ineffective.**

2 311. Once a child has begun scrolling on Meta’s platforms, they can use the platforms
3 entirely without the protective aid of parental guidance. Indeed, Facebook and Instagram are
4 plainly problematic due to the lack of adequate parental controls, which hinder parents’ ability to
5 monitor and protect their children from harm.

6 312. Meta does not require “verifiable parental consent” for minors to use Facebook or
7 Instagram. Meta has chosen to avoid its obligations by *purporting* to ban children younger than
8 13, despite, as demonstrated above, knowing that such children continue to access and use its
9 platforms due to its inadequate age verification methods.

10 313. A reasonable company that knows or should have known its platforms are harmful to
11 adolescents would require parental consent for *any* minor to use them. But Meta’s lack of parental
12 consent requirement for users robs parents of an important way to protect their children from the
13 harms caused by Instagram and Facebook.

14 314. Meta’s platforms largely lack readily available parental controls, despite their
15 affordability and ease of implementation. For example, Meta has chosen not to: (a) require
16 children’s accounts on Facebook and Instagram to be linked to their parents’, as it does with
17 another one of its platforms—Messenger Kids;³⁹⁹ (b) send reports of a child’s activity to parents;
18 (c) allow parents to implement maximum daily usage limitations or to prohibit use during certain
19 hours (e.g., school and sleep hours); (d) notify parents about interactions with accounts associated
20 with adults; or (e) require parental approval before a minor can follow new accounts.

21 315. Controls like these would enable parents to track the frequency, time of day, and
22 duration of their child’s use, and identify and address problems arising from such use. It is
23 reasonable for parents to expect that social media companies that actively promote their platforms
24 to minors will undertake reasonable efforts to notify parents when their children’s use becomes
25 excessive, occurs overnight, or becomes otherwise problematic. Meta could feasibly design

26 _____
27 ³⁹⁹ Loren Cheng, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4,
28 2017), <https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/>.

1 Instagram and Facebook to address these concerns at negligible cost.

2 316. Meta creates a foreseeable risk to NYC Plaintiffs’ schools and students through its
3 design choices, and then attempts to shift the burden of protection from those platforms onto
4 parents. Meanwhile, Meta intentionally designs Facebook and Instagram to aid children’s efforts
5 to undermine parental supervision. For example, Instagram and Facebook allow children to create
6 a limitless number of anonymous accounts without parental approval or knowledge and allows
7 kids to block parent profiles.⁴⁰⁰ On Instagram, children can post stories to “Close Friends Only,”
8 i.e., to a select group of followers, excluding their parents. On Facebook, children can place their
9 parents on a “restricted list” of people who are unable to view their stories. Meta has intentionally
10 designed many aspects of Instagram and Facebook to undermine parental supervision in an effort
11 to maximize teen usage: “If Mom starts using an app all the time, the app can lose a ‘cool’ factor,
12 if we’re not conscious of separation.”⁴⁰¹ “[W]e should be thinking about how having parents being
13 on Instagram might affect graph management and teen engagement over time. Discovery/usage of
14 additional accounts could prove critical for authentic sharing by teens.”⁴⁰²

15 317. As one internal document described the issue:

16 [A]re teens able to maintain spaces that feel sacred to them (and their friends) or do
17 we see decreased usage or new behavior patterns emerge as household members join?
18 . . . Preservation of protected spaces will require: [1] Learning how to create spaces
19 within the app where teens feel like they have privacy both from their own parents
but also privacy from non-peers (e.g., Aunt Sally, neighbor down the street, teachers,

20 ⁴⁰⁰ In 2018, Meta observed that “the participation rate of multiple account switching (basically the
21 equivalent of finstas) [was] going up,” with 36% of teens engaging in multiple account switching.
22 Haugen_00017698 at Haugen_00017784. “Finsta,” a widely used slang term, is a contraction of
23 “fake” and “Insta” (short for Instagram). “It is neither an official designation nor a type of account
24 offered by Facebook. Rather, it is a term many users ascribe to secondary accounts they create for
themselves on Instagram, where their identities — and, often, the content of their posts — are
obscured to all but a small, carefully chosen group of followers.” Caity Weaver & Danya Issawi,
‘Finsta,’ Explained, N.Y. Times (Sept. 30, 2021), [https://www.nytimes.com/2021/09/30/style/finsta-
instagram-accounts-senate.html](https://www.nytimes.com/2021/09/30/style/finsta-instagram-accounts-senate.html) [<https://perma.cc/T737-UG7V>].

25 ⁴⁰¹ Haugen_00016728 at Haugen_00016735.

26 ⁴⁰² Haugen_00011969 at Haugen_00011975. “Graph management” apparently refers to efforts by a
27 user to unfollow accounts, i.e., “prun[e].” META3047MDL-003-00146492 at META3047MDL-
28 META3047MDL-003-00178437 at META3047MDL-003-00178437–
META3047MDL-003-00178438.

1 etc.). [2] Finding opportunities, such as [“]close friends[”] where teens have their
2 own, protected peer communities. [3] Understanding the value of certain features
3 being more complex (i.e., indirectly made for teens because more challenging for
4 parents or preteens). Both Snapchat and TikTok are somewhat confusing to parents,
5 in turn affording teens a protected place to play/engage.⁴⁰³

6 318. Meta’s internal documents recognize that parents are largely ill-equipped to protect
7 children from its platforms. As one employee asserted in the discussion of a focus group survey
8 regarding the mental health impact of Meta’s platforms on teenagers:

9 The other big reason that parents aren’t a source of support has to do with parents’
10 ability (or really, their inability) to understand what adolescence in the age of social
11 media looks and feels like. The parents of today’s teens came of age before social
12 media, so they don’t know and *can’t* know what it’s like to live in what feels like a
13 constant spotlight. When today’s parents were teens, social comparison was much
14 more limited both in terms of scope and scale. Teens today compare themselves to
15 many more people, much more often, and about more parts of life than their parents
16 did during their adolescence. In addition, today’s parents were able to turn it off when
17 they went home, while teens feel compelled to be on social media all the time.⁴⁰⁴

18 319. When employees have raised the possibility of additional safeguards—“could we
19 offer a parental control feature so that parents and kids could learn and cope together?”—Meta has
20 consistently ignored them.⁴⁰⁵

21 320. Finally, Meta has failed to develop effective reporting tools to deal with abuse
22 directed at underage Instagram and Facebook users. Meta does not have a phone number that a
23 parent, caregiver, teacher, school counselor, school administrator, or child can call to report such
24 abuse in real time, and its online reporting mechanisms lack immediate response protocols,
25 regardless of the seriousness of the harm at issue. In fact, Meta has, in some instances, declined to
26 respond to reports filed through its online reporting tool, citing technical issues.

27 **c. Facebook and Instagram were intentionally designed to addict its users.**

28 321. From the moment a child first begins to scroll on Facebook or Instagram, Meta
assails them with an addictive and harmful features. The platforms permeate with user experience

⁴⁰³ Haugen_00016728 at Haugen_00016735.

⁴⁰⁴ Haugen_00017069 at Haugen_00017173.

⁴⁰⁵ *Id.* at Haugen_00017172.

1 and user interface designs intended to create and maintain an addictive “flow-state,” using auto-
2 playing features, time-limited experiences, IVR, reciprocity, and gamification.

3 322. To drive user engagement (and thereby drive data collection and advertising
4 revenue), Facebook and Instagram utilize a series of design features that are carefully calibrated to
5 exploit users’ neurobiology, especially aspects unique to minors. Indeed, Meta’s product design
6 team’s research with respect to “long-term retention” confirmed that “the young ones are the best
7 ones . . . You want to bring people to your service young and early.”⁴⁰⁶ These features work in
8 tandem with algorithmic ranking, discussed below, to promote addictive engagement. Meta
9 understands this, “teens tell us that they try to take a break but feel compelled back onto the
10 app.”⁴⁰⁷ But it does not warn prospective or current users about the following features or their
11 safety risks, which are particularly harmful to children and result in serious problems in NYC
12 Plaintiffs’ schools.

13 323. *First*, Meta programs IVR into its platforms. Behavioral training via IVR keeps users
14 endlessly scrolling in search of a dopamine release, oftentimes despite their desire to put their
15 device down and move onto other activities. Children, who are less likely to have adequate
16 impulse control than adults, are more susceptible to being drawn into this engineered flow state
17 and more likely to grow dependent on Facebook or Instagram.

18 324. *Second*, Facebook and Instagram utilize “Likes” to control the release of dopamine
19 in children. This feature, which Meta first created for Facebook and “introduced . . . to the world”
20 in 2010, allows users to indicate that they approve a post, and visibly tallies the number of “Likes”
21 any given post has earned.⁴⁰⁸ Instagram launched in 2010 with the Like feature built-in—a user
22 can “Like” a post simply by tapping a heart-shaped button.

23 325. As with a slot machine, users never know when a “Like” will come. Rather than
24 delivering “Likes” in real time, Meta’s platforms space out “Likes” (and other notifications such

25 ⁴⁰⁶ Mass. AG Compl. at 39, ¶ 146.

26 ⁴⁰⁷ META3047MDL-003-00093303 at META3047MDL-003-00093303.

27 ⁴⁰⁸ Ray C. He, *Introducing new Like and Share Buttons*, Meta (Nov. 6, 2013),
28 <https://developers.facebook.com/blog/post/2013/11/06/introducing-new-like-and-share-buttons/>.

1 as comments and follows) to trigger on a schedule most likely to strengthen users’ addiction, e.g.,
2 when they would otherwise end their use sessions. This design conditions users to stay on the
3 platforms, including through social comparison and feedback seeking, creating detrimental effects
4 on minors’ physical and mental health. Indeed, Meta knows from its own internal research that the
5 “Like” feature negatively impacts its younger users.⁴⁰⁹ In that research, Meta acknowledged how
6 much younger users care about the number of “Likes” they received.⁴¹⁰

7 326. Despite this knowledge, Meta has expanded the “Likes” feature in both Facebook
8 and Instagram. In December 2016, Meta began allowing users to “Like” comments, not just posts.
9 In February 2022, Meta began allowing users to “Like” Instagram Stories.⁴¹¹ Expanding the
10 “Like” feature has intensified and multiplied the body of feedback that teen users receive (or don’t
11 receive) on their posts, preying on their desire to seek validation through comparison with others.

12 327. Meta’s research confirms that hiding “Likes” for all its users would decrease social
13 comparison on the apps.⁴¹² Yet its research also demonstrated that hiding “Likes” would decrease
14 the rates at which users click on advertisements (and thereby lower Meta’s ad revenue).⁴¹³

15 328. For that reason—despite its ability to alleviate the negative impact of “Likes” on
16 younger users—Meta chose only to implement ineffective, nominal measures as a public relations
17 strategy. Meta first created the option for users to hide “Like” counts in May 2021, but it made
18 this an optional setting left off by default.⁴¹⁴ Moreover, even when hidden, the number of “Likes”
19 remains visible to the poster. These changes stop short of resolving the issue of negative social
20 comparison and compulsive use that these score-keeping features cause.

21 ⁴⁰⁹ See Haugen_00008207 at Haugen_00008210 (summarizing 2020 research and referencing 2018
22 research regarding the stress and anxiety that “Likes” cause teens).

23 ⁴¹⁰ *Id.* at Haugen_00008232.

24 ⁴¹¹ Jhinuk Sen, *Instagram is adding Likes to Stories so it doesn’t clog up people’s inboxes*, Bus.
25 Today (Feb. 15, 2022), <https://www.businesstoday.in/technology/news/story/instagram-is-adding-likes-to-stories-so-it-doesnt-clog-up-peoples-inboxes-322661-2022-02-15>.

26 ⁴¹² Haugen_00008207 at Haugen_00008232.

27 ⁴¹³ *Id.* at Haugen_00008250.

28 ⁴¹⁴ Instagram, *Giving People More Control on Instagram and Facebook*, Meta (May 26, 2021),
<https://about.fb.com/news/2021/05/giving-people-more-control/>.

1 329. *Third*, Meta has designed its video features to create and maximize users’ flow state,
2 which also keeps them immersed in its platforms for longer periods of time. Video clips on
3 Facebook Reels and Instagram Reels automatically play as users scroll, and automatically restart
4 once scrolling is concluded. Reels cannot be paused, and tapping on the video will simply mute its
5 audio. In addition, Meta imposes limits on the length of videos on Reels (currently 90 seconds,
6 and at times as short as 15 seconds). These limits ensure that users do not become bored by long
7 videos and end their sessions.

8 330. Meta designed the comment features of Reels to minimize any disruption to users’
9 heightened flow state. The interface of Reels displays the “Like,” “Comment,” “Save,” and
10 “Share” buttons on the bottom right of the screen. This placement avoids the milliseconds of delay
11 or discomfort that could disrupt the flow state of right-handed users if placed elsewhere on the
12 screen. Furthermore, these buttons are overlaid on top of the continuously playing clips, to
13 eliminate any temporal or visual interruption during which a user might evaluate whether to
14 continue using the product. Likewise, when a user taps to view the comments on a Reel, the
15 video’s audio and the top quarter of the video continue to play behind the comments section.
16 Again, this design feature keeps the user’s attention on the feed.

17 331. In keeping with its study of IVR, Meta knows when to strategically interrupt a user’s
18 flow. Occasionally, while a video is playing, a comment from the video will appear on the bottom
19 of the screen, even without the user tapping to view the comments section. These comments are
20 selected, displayed, and timed intentionally, to retain a user’s attention by engaging with the
21 comments section.

22 332. And Meta tracked data showing features like auto-play furthered Meta’s goal of
23 increasing the amount of time young users spent on Facebook and Instagram:

24 We have been investing effort in researching time spent to find opportunities. By
25 comparing long-term tests that always or never auto-play videos, we find that auto-
26 play increases overall time spent for some people and cannibalizes time spent for
27 others. Using SmartScorer, we found that auto-play increases time spent for people
28 with high inventory utilization and younger people (college and late high school), and

1 decreases time spent for other people. This shows there is opportunity to grow time
2 spent by personalizing auto-play rules in feed (details).”⁴¹⁵

3 333. *Fourth*, Meta carefully calibrates the notifications it sends outside of the Facebook
4 and Instagram apps, to maximize success in drawing back users who are not presently using the
5 platforms and engaging in unrelated activities, such as attending school. Internal company
6 documents outline Meta’s strategy of pursuing “Teen Growth” by “leverag[ing] teens’ higher
7 tolerance for notifications to push retention and engagement.”⁴¹⁶ By default, Facebook and
8 Instagram notify users through text and email about activity that might be of interest, which
9 prompts users to open and reengage with the platforms. However, Meta intentionally chooses to
10 use “clickbait”⁴¹⁷ to display only a limited amount of information in notifications, in order to
11 trigger curiosity and manipulate the user to click or tap through to the product. In December 2020,
12 Meta internally acknowledged that the goal of this feature was to optimize engagement at the
13 expense of value to users: “A few years ago we stopped sending out emails telling you what
14 happened - e.g., telling you what your friend did - instead we just say ‘someone comment [sic] on
15 your post,’ in the hope that you’ll click through. This a clear value-engagement tradeoff.”⁴¹⁸
16 Similarly, Meta stopped sending push notifications telling users about friend activities, finding
17 that, without notifications, users were forced to go to the product itself to “check what’s
18 happening,” thereby initiating a new session, increasing engagement, and improving Meta’s
19 bottom line.⁴¹⁹ Meta designed these features despite knowledge that they would increase addictive
20 behaviors,⁴²⁰ and in disregard of safer alternative designs.⁴²¹

21 _____
22 ⁴¹⁵ MDL AG Compl. at 27, ¶ 145.

23 ⁴¹⁶ MDL AG Compl. at 52, ¶ 304.

24 ⁴¹⁷ *Clickbait*, Merriam-Webster Dictionary, <https://www.merriam-webster.com/dictionary/clickbait>
25 (defined as “something (such as a headline) designed to make readers want to click on a hyperlink
26 especially when the link leads to content of dubious value or interest”).

27 ⁴¹⁸ Haugen_00010114 at Haugen_00010117.

28 ⁴¹⁹ *Id.*

⁴²⁰ See Haugen_00016893 at Haugen_00016899–Haugen_00016902.

⁴²¹ See Haugen_00016893 at Haugen_00016913 (Meta intern suggesting changing to a subtler form
(footnote continued))

1 334. Meta knows that its storm of notifications is successful in keeping youth on its
2 platforms. In a November 2019 internal presentation: *Instagram Notification Systems Roadshow*,
3 Meta’s research revealed that as a result of its “high volume” push notifications, young users are
4 “overload[ed],” “overwhelm[ed],” and compelled to re-open Instagram repeatedly throughout the
5 day.⁴²²

6 335. Similarly in May 2020, Meta conducted research: *Teen Fundamentals*. This research
7 showed that because “[a]pproval and acceptance are huge rewards for teens,” notifications are
8 highly effective in encouraging teens to continue coming back to Meta’s platforms over and over
9 again in hopes of receiving an “award,” i.e., some type of positive social validation.⁴²³ Indeed,
10 Meta’s research noted that teen brains have “insatiable” need for these “feel good dopamine
11 effects.”⁴²⁴

12 336. Meta’s studied manipulation of user engagement through notifications is particularly
13 detrimental to teenagers, who lack impulse control and crave social rewards, and who are
14 therefore more susceptible to falling into compulsive patterns of product use. Those harms are
15 compounded by the fact that Meta sends push notifications in the middle of the night, prompting
16 children to re-engage with Instagram and Facebook when they should be sleeping. Disturbed and
17 insufficient sleep is associated with poor health outcomes.⁴²⁵

18 337. Meta pursued its strategy of maximizing engagement through notifications to young
19 users despite knowing from its own internal research that it causes harm to young users’ well-
20 being. In July 2018, a research article circulated internally within Meta: *Problematic Facebook*
21 *use: When People Feel Like Facebook Negatively Affects Their Life*, noted that notifications are

22 _____
23 of notifications); Haugen_00016893 at Haugen_00016915–Haugen_00016916 (Meta intern urging
24 the company to stop “inundating users with excessive notifications” and instead focus on user
25 experience to create meaningful connections for users).

26 ⁴²² Mass. AG Compl. at 28, ¶ 93.

27 ⁴²³ Mass. AG Compl. at 27, ¶ 91.

28 ⁴²⁴ Mass. AG Compl. at 35, ¶ 129.

⁴²⁵ *The Teen Brain: Still Under Construction* at 6, Nat’l Inst. Mental Health (2011), <https://foster-ed.org/wp-content/uploads/2017/02/The-Teen-Brain-Still-Under-Construction-2011.pdf>.

1 psychologically harmful to young users by “caus[ing] inattention and hyperactivity among teens,”
2 and “reduc[ing] productivity and well-being.”⁴²⁶

3 338. Similarly, in a November internal presentation: *[Instagram] Notification Systems*
4 *Roadshow*, Meta’s employees acknowledged that some of its users are “overloaded because they
5 are inherently more susceptible to notifications dependency.”⁴²⁷ Despite acknowledging users’
6 concern that Instagram’s push notifications had the potential to “constantly harm . . . mental
7 health,” the presentation did not propose any product changes to protect young users’ mental
8 health—and instead deferred the “harmful effect on teen usage” for further investigation.⁴²⁸

9 339. *Fifth*, the “Stories” feature of both Facebook and Instagram is designed to create
10 artificial urgency so that users return to the apps from frequently. “Stories” was added by Meta in
11 response to the growing popularity of Snapchat with teenagers in 2016. “Stories” appear at the top
12 of a user’s home page upon opening the app and are available to view for only 24 hours, after
13 which they disappear. This creates pressure to use the product daily, or else risk missing out on
14 dopamine-causing stimuli or social interactions. This feature is particularly addictive to adolescent
15 users, like NYC Plaintiffs’ students, who feel increased social pressure to view all their contacts’
16 stories each day before they disappear, thus increasing their compulsive usage and potential
17 addiction to the product.⁴²⁹ The ephemeral nature is a ploy intended to inspire urgent perusal, and
18 it works.⁴³⁰

19 340. Meta’s internal data shows that its “Stories” feature successfully increased the
20 amount of time users spend on Instagram. Internal data from 2018 touted statistics that 72% of

21 ⁴²⁶ Haugen_00021690 at Haugen_00021708.

22 ⁴²⁷ MDL AG Compl. at 53, ¶ 312.

23 ⁴²⁸ *Id.*

24 ⁴²⁹ Sarah Lempa, *Science Behind [sic] Why Instagram Stories Are So Addicting*, Healthline (Apr. 5,
25 2021), <https://www.healthline.com/health/why-are-instagram-stories-so-addicting#The-story-behind-the-Stories>.

26 ⁴³⁰ Madiha Jamal, *Ephemeral Content — The Future of Social Media Marketing*, Better Mktg. (Mar.
27 2, 2021), <https://bettermarketing.pub/ephemeral-content-the-future-of-social-media-marketing-996d265916c2#:~:text=Ephemeral%20content%20relates%20to%20the,WhatsApp%20Stories%2C%20and%20LinkedIn%20Stories>.

1 people on Instagram viewed Stories each day, that “[g]rowth is especially strong” among U.S.
2 teens, and that based on these viewership rates “Stories Ads Revenue” had grown to be “20% of
3 daily Instagram revenue.”⁴³¹ Internal Meta documents from 2018 also state that “we’ve invested in
4 [Facebook] stories—and have seen engagement more than double[;] teen original sharing [is] up
5 for the first time since 2012.”⁴³²

6 341. Another purposefully designed FOMO-inducing feature is Instagram’s “Live”
7 feature that Meta launched in 2016. Through the “Live” feature, an Instagram user can broadcast
8 livestream videos for their followers or the public to watch and react to in real time.⁴³³ As the
9 feature’s name suggests, these videos are only accessible and can be interacted with during the
10 time that user is going “Live.”

11 342. When an Instagram account “goes Live,” Instagram sends out a notification on the
12 mobile devices of users that follow that account that reads, “[@user] started a live video. Watch it
13 before it ends!”⁴³⁴ Instagram sends this notification even when a user does not have the Instagram
14 app open to induce them to re-open and revisit the platform.

15 343. Emails to Instagram executives show that the “Live” feature was designed to
16 maximize young users’ time spent on Instagram. In a December 2015 strategy email to Meta’s
17 executives, including former Instagram CEO Kevin Systrom and CTO Mike Krieger, Meta
18 employees set goals “[to] drive substantial watch time via Live” by “[finding] partners to appeal to
19 teens” and “driving time spent” for teens by “supporting initiatives” around “Live Events.”⁴³⁵

20 344. Meta quickly found that the Live feature was popular among young users, including
21 teens. An internal highlights memo noted in February 2017 that of the over 9 million daily
22 broadcasts, “[Meta] found that 35% of [Live] broadcasters are teens (early and late high
23

24 ⁴³¹ Mass. AG Compl. at 31, ¶ 109.

25 ⁴³² MDL AG Compl. at 21, ¶ 101.

26 ⁴³³ *Live*, Instagram Help Ctr., https://help.instagram.com/272122157758915/?helpref=hc_fnav.

27 ⁴³⁴ *Notification Settings*, Instagram Help Ctr., <https://help.instagram.com/105448789880240>.

28 ⁴³⁵ Mass. AG Compl. at 33–34, ¶ 122.

1 school).”⁴³⁶

2 345. As another set of Meta researchers acknowledged, the majority of negative
3 experiences on Instagram come not from direct interactions with others (i.e., through comments or
4 direct messages) but rather through algorithmically-generated recommendations, via Explore,
5 Feed, Stories, or hashtag pages.⁴³⁷

6 346. All of the above design choices, in addition to those discussed in the section that
7 follows, interact with and compound one another to make Meta’s platforms relentlessly addictive
8 and harmful for youth, including youth in NYC Plaintiffs’ schools and community.

9 **d. Meta knew that its platforms caused problematic use and failed to**
10 **prevent it.**

11 347. Meta has long been aware of this compounding likelihood of injury posed by its
12 platforms.

13 348. In 2017, Meta investigated Facebook users who were addicted to the product—that
14 is, those who “cannot stop using [the] product to the point where it can cause them harm.”⁴³⁸ The
15 research found that “[i]n a given week, approximately 5.9 million people leave Facebook” because
16 they “spent too much time” or because they were taking a temporary break and “planned to
17 return.”⁴³⁹ “This subset provided a good signal for people who could be addicted, who ultimately
18 leave Facebook as a solution.”⁴⁴⁰ The analysis also found that this subset had a higher number of
19 sessions per day, received more notifications, and responded quicker to notifications compared to
20 all users.⁴⁴¹ In 2018, Meta examined the issue of “Facebook addiction” through a study:
21 *Problematic Facebook use: When people feel like Facebook negatively affects their life.*⁴⁴² The

22 ⁴³⁶ MDL AG Compl. at 21, ¶ 106.

23 ⁴³⁷ META3047MDL-003-00087111 at META3047MDL-003-00087112.

24 ⁴³⁸ Haugen_00016893 at Haugen_00016895. This group’s investigation also included meeting with
Nir Eyal, author of the book: *Hooked: How to Build Habit-Forming Products*.

25 ⁴³⁹ Haugen_00016893 at Haugen_00016898.

26 ⁴⁴⁰ *Id.*

27 ⁴⁴¹ Haugen_00016893 at Haugen_00016899–Haugen_00016902.

28 ⁴⁴² Haugen_00021690 at Haugen_00021690.

1 investigators defined “problematic use” as meaning: “Serious problems with sleep, work, or
2 relationships that they attribute to Facebook AND concerns or preoccupations about how they use
3 Facebook (e.g., a fear of missing out (FOMO) or lack of control)[.]”⁴⁴³ Notably, the investigators
4 did not target the heaviest Facebook users in their research.⁴⁴⁴

5 349. The study found that approximately 5% of teens ages 13-20 were problematic
6 users.⁴⁴⁵ “Problematic use is highest among teens and people in their 20s, consistent with previous
7 findings that younger people generally have more problems with self-regulation.”⁴⁴⁶ Additionally,
8 “problematic users” evidenced common tendencies, such as: (a) accessing and spending more time
9 on Facebook; (b) using Facebook late at night; (c) receiving more and responding more quickly to
10 push notifications; (d) temporarily deactivating their account in the past; and (e) sending far more
11 messages per minute with a higher ratio of messages sent to messages received.⁴⁴⁷ Meta
12 understands that “teens feel addicted to [Instagram] and feel a pressure to be present” and “like
13 addicts, they feel that they are unable to stop themselves from being on [Instagram][.]”⁴⁴⁸

14 350. A study into Instagram user behaviors from that same year similarly found that “high
15 time spent users do tend to be disproportionately younger users, and these users may warrant extra
16 attention.”⁴⁴⁹ The study found that “[a]s time spent increases, we see a larger proportion of users
17 that are high school, college or early work life-stages, with additional increases in high school
18 when we zoom in on the top 1% of time spent users.”⁴⁵⁰

19 351. Meta knows that “problematic use” of Facebook and Instagram leads to real
20 problems. In one internal company document, Meta acknowledged that the pressure to be present

21 ⁴⁴³ *Id.* at Haugen_00021692.

22 ⁴⁴⁴ *Id.* at Haugen_00021697.

23 ⁴⁴⁵ *Id.* at Haugen_00021699.

24 ⁴⁴⁶ *Id.* at Haugen_00021697.

25 ⁴⁴⁷ *Id.* at Haugen_00021703–Haugen_00021704; Haugen_00021708–Haugen_00021710,
Haugen_00021715–Haugen_00021716.

26 ⁴⁴⁸ META3047MDL-003-00157036 at META3047MDL-003-00157036.

27 ⁴⁴⁹ Haugen_00017177 at Haugen_00017181.

28 ⁴⁵⁰ *Id.*

1 and obtain validation on Instagram meant that teens lacked the capacity to “switch off and shut
2 down,” noting that teens “can get addicted to things that make them feel bad.”⁴⁵¹ One of Meta’s
3 data scientists did not mince words when describing this phenomenon to their colleagues:

4 I worry that driving sessions incentivizes us to make our product more addictive,
5 without providing much more value. How to keep someone returning over and over to
6 the same behavior each day? Intermittent rewards are most effective (think slot
7 machines), reinforcing behaviors that become especially hard to extinguish—even
8 when they provide little reward, or cease providing reward at all.⁴⁵²

9 Another Meta employee was clear-eyed that “little reward” was too charitable—and that addictive
10 use was actively harming kids’ mental health:

11 In the focus groups teens told us that they don’t like the amount of time they spend on
12 the app but feel like they have to be present. They often feel ‘addicted’ and know that
13 what they’re seeing is bad for their mental health but feel unable to stop themselves.
14 This makes them not feel like they get a break [sic] or to can’t switch off social
15 media[.]

16 [A]bout 30% (and even larger proportions of those who are unsatisfied with their
17 lives) said that the amount of time they spend on social media makes them feel worse.
18 About half of teens in both [the U.S. and UK] want Instagram to encourage them to
19 take a break or to get off the app[.]

20 [In another survey,] we found that time spent is among one of the most negative
21 experiences for [Instagram] (25%+ say they spend too much time on social media,
22 and it’s worst on Instagram and Facebook). At the same time, they didn’t think there
23 was anything they could do about it and had fairly negative things to say about the
24 time spent tools we have (particularly that the tools are easy to ignore).⁴⁵³

25 352. In January 2021, another Meta employee wrote: “No one wakes up thinking they
26 want to maximize the number of times they open Instagram that day. But that’s exactly what our
27 product teams are trying to do.”⁴⁵⁴

28 353. Meta failed to invest in adequate tools to limit the harm their platforms inflicted on
users. As their internal documents reveal, “the tools we currently have aren’t effective at limiting

25 ⁴⁵¹ Haugen_00017069 at Haugen_00017128, Haugen_00017132.

26 ⁴⁵² Haugen_00010114 at Haugen_00010127.

27 ⁴⁵³ Haugen_00017069 at Haugen_00017171.

28 ⁴⁵⁴ META3047MDL-003-00161686.

1 [users'] time on the ap [sic][.]”⁴⁵⁵ Nonetheless, Meta publicly presented certain of these tools as
2 solutions, despite knowing of their ineffectiveness. For example, Meta offered its users a feature
3 that purported to show how much time users had spent on Instagram, and Meta touted this feature
4 “when speaking to consumers, the press, and stakeholders about our efforts to combat social
5 media addiction.”⁴⁵⁶ But internally, Meta acknowledged that the data reported by this tool was
6 fundamentally “incorrect”:

7 It’s not just that Apple / Google have better data. Ours is wrong. Far worse. We’re
8 sharing bad metrics externally. We’ve been unable to right it despite several person-
9 months of efforts. . . . So it’s wrong (bad enough in itself), can’t be fixed easily
10 (we’ve tried), has been half-rolled-out for a while . . . the group that audits metrics we
11 provide to the outside world[] has called us out on it. . . . The reason this is relevant is
12 we vouch for these numbers. Any day they’re out there is a legal liability.⁴⁵⁷

11 354. Meta’s failure to prevent, and indeed pursue, compulsive use by children, and the
12 harms resulting therefrom, are a function of its misplaced priorities. One “integrity researcher” at
13 Facebook wrote an internal article in August 2020 with her parting thoughts as she left the
14 company. She explained that Meta’s leadership consistently ignored concerns about user safety:

15 Integrity teams are facing increasing barriers to building safeguards. . . . [T]ime and
16 time again I’ve seen promising interventions from integrity product teams, with
17 strong research and data support, be prematurely stifled or severely constrained by
18 key decision makers—often based on fears of public and policy stakeholder
19 responses. Similarly (though even more concerning), I’ve seen already built &
20 functioning safeguards being rolled back for the same reasons . . . While mountains of
21 evidence is (rightly) required to support a new intervention, none is required to kill
22 (or severely limit) one. . . . [This] is intended as a call to reflection for those
23 decisions-makers [sic] imposing constraints.⁴⁵⁸

21 355. Meta’s decision to addict teenage users by rewiring their brains has not aged well for
22 some of its former employees. Chamath Palihapitiya, the former Vice President of User Growth at
23 Facebook, admitted that he feels “tremendous guilt” about his contributions to social media,
24 saying “[t]he short-term, dopamine-driven feedback loops that we have created are destroying

25 ⁴⁵⁵ META3047MDL-003-00157036 at META3047MDL-003-00157036.

26 ⁴⁵⁶ *Id.*

27 ⁴⁵⁷ META3047MDL-003-00157133 at META3047MDL-003-00157133.

28 ⁴⁵⁸ Haugen_00021096 at Haugen_00021097 (emphasis omitted).

1 how society works[.]”⁴⁵⁹

2 **e. To combat declining revenue drivers, Meta further revamped its**
3 **algorithms to maximize addictive efficacy, despite increased awareness of**
4 **palpable harm to youth.**

5 356. As a child continues to glide through the platforms’ sleek UX and UI design, Meta’s
6 algorithms track innumerable data points about the child’s behavior (especially noting which
7 stimuli captures the child’s attention most effectively) and uses this data to fuel one of the most
8 addictive component of its platforms: algorithmic recommendations.

9 357. Meta has invested its vast resources to intentionally design Facebook and Instagram
10 to be addictive to adolescents, all the while concealing these facts from its users and the public,
11 including NYC Plaintiffs, NYC Plaintiffs’ students, and NYC Plaintiffs’ community.

12 358. As discussed above, in their original forms, Meta’s Facebook and Instagram
13 algorithms were ranked chronologically, meaning that a particular user’s feed was organized
14 according to when material was posted or sent by the people the user followed. In 2009, Meta did
15 away with Facebook’s chronological feed in favor of engagement-based ranking; in 2016, it did
16 the same on Instagram. This “engagement-based” system meant that posts that received the most
17 likes and comments were highlighted first for users. But facing declining engagement, Meta
18 redesigned its algorithms once again in or around early 2018. This change prioritized “meaningful
19 social interaction” (“MSI”), with the goal of showing users content with which they were more
20 likely to engage. The MSI-oriented algorithms purportedly emphasize the interactions of users’
21 connections, e.g., Likes and comments, and give greater significance to the interactions of
22 connections that appear to be closest to users. Meta’s current algorithms consider a post’s Likes,
23 shares, and comments, as well as a respective user’s past interactions with posts with similar
24 characteristics, and displays the post in the user’s feed if it meets these and certain other
25 benchmarks.

26 ⁴⁵⁹ Amy B. Wang, *Former Facebook VP says social media is destroying society with ‘dopamine-*
27 *driven feedback loops’*, Wash. Post (Dec. 12, 2017), <https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/> [<https://perma.cc/LC22-8SW>].

1 359. In algorithmically generating users’ feeds, Meta draws upon the vast amount of data
2 it collects about and from its users. Meta’s algorithms combine the user’s profile (e.g., the
3 information posted by the user on the product) and the user’s dossier (the data collected and
4 synthesized by Meta, to which it assigns categorical designations) along with a dossier of similar
5 users.⁴⁶⁰ Meta’s algorithms identify and rank recommended posts to optimize for various
6 outcomes, such as for time-spent by a user or for user engagement. This can have serious mental
7 health consequences, and associated impact on NYC Plaintiffs’ operations, because Meta knows
8 that teens “can get addicted to things that make them feel bad.”⁴⁶¹

9 360. Much of what Meta shows users is material that they did not sign up for but cannot
10 avoid. In a 2019 internal document, a Meta data scientist explained that “users have told us the
11 pages they would like to see content from, but we often override those explicit preferences
12 because our predictions of what will get shared and engaged with disagree.”⁴⁶² This same
13 employee pointed to additional data demonstrating that users get relatively few connected posts
14 (from pages they chose to like) as opposed to unconnected posts that are reshared by others, even
15 as Meta knows that such material is less valued by users.⁴⁶³

16 361. Meta also optimizes the design of its platforms for overall “network value”—that is,
17 what will get the most downstream engagement by other users—rather than what that specific user

18 ⁴⁶⁰ Instagram’s former Head of Product Analytics defined “ranking” as “an ordering of content by
19 importance or relevance” in a 2018 post: *Is Ranking Good?*. Haugen_00002372 at
Haugen_00002374.

20 ⁴⁶¹ Haugen_00006798 at Haugen_00006799 (observing that Meta’s recommendation algorithms “are
21 often prone to recommending bad content”); Haugen_00024997 at Haugen_00024997 (conducting
22 experiment showing that, in 3 weeks, “by following just . . . *recommended* content, the test user’s
23 News Feed has become a near constant barrage of polarizing nationalist content, misinformation,
and violence and gore”); Haugen_00024997 at Haugen_00024998 (“[W]hen Watch isn’t sure what
24 you want, it seems to recommend a lot of softcore porn[.]”); Haugen_00003739 at
Haugen_00003740 (“[Instagram] is more ‘successful’ ranking harmful content than benign content,
25 and is more likely to mistakenly rank higher [] harmful content than to mistakenly rank higher
benign content.”); Haugen_00017069 at Haugen_00017128.

26 ⁴⁶² Haugen_00021247 at Haugen_00021248; *see also* Haugen_00006798 at Haugen_00006799
(Meta Research Scientist in 2019 stated, “it’s at best unclear whether users ‘want’ us to put
27 unconnected stories in their feed, even if they like some of them.”).

28 ⁴⁶³ Haugen_00021247 at Haugen_00021248.

1 would like.⁴⁶⁴ As the Meta data scientist put it, “we show things to users that we think they have a
2 small chance of sharing, leading to comments between people who see it downstream, over things
3 that have a greater chance of being explicitly liked by that user.”⁴⁶⁵

4 362. Through these algorithms, Meta intentionally supplants the material that users have
5 elected to see with items that it believes will drive more use and engagement. Thus, the platforms
6 that Meta touts as “[g]iv[ing] people the power to build community and bring[ing] the world
7 closer together[,]” are designed in a way that prioritizes not social connection but product use at
8 all costs, even to the detriment of the health and safety of young people.⁴⁶⁶ The result for Meta is
9 an increase in its bottom line. The result for young users is platforms that are so addictive that they
10 return again and again, even when their mental and physical health suffers greatly.

11 363. Meta knew that its engagement-based ranking algorithm (and its subsequent,
12 iterative MSI ranking algorithm) was structured so that posts which produces intense reactions
13 (i.e., strong engagement) triggers amplification by the apps. This propels users into the most
14 reactive experiences, favoring posts that generate engagement because they are extreme in nature.
15 Zuckerberg publicly recognized this in a 2018 post, in which he demonstrated the correlation
16 between engagement and sensational content that is so extreme that it impinges upon Meta’s own
17 ethical limits, with the following chart:⁴⁶⁷

18 ///

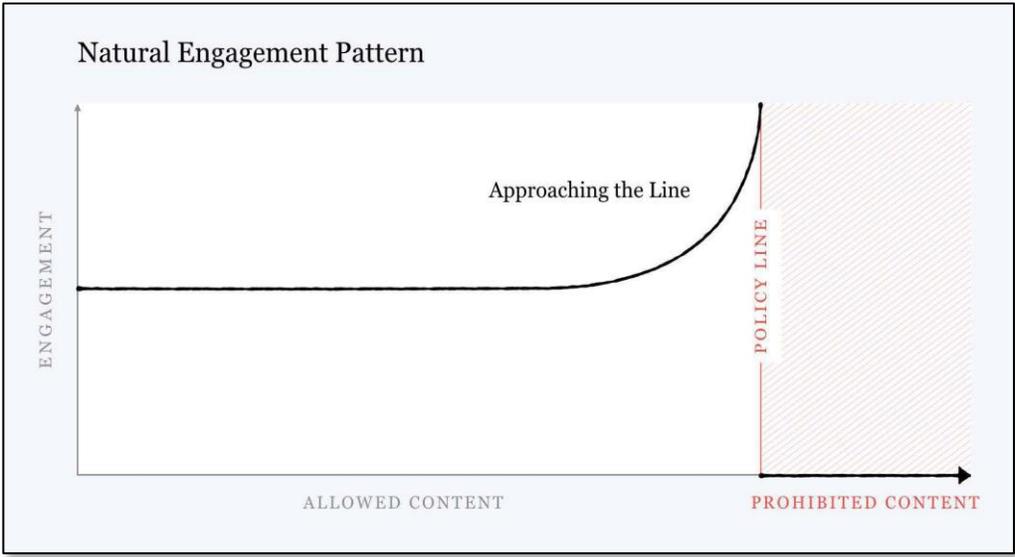
24 ⁴⁶⁴ *Id.* at Haugen_00021251.

25 ⁴⁶⁵ *Id.*

26 ⁴⁶⁶ *Our Mission*, Meta, <https://about.meta.com/company-info/>.

27 ⁴⁶⁷ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement* at 6, Facebook,
28 <https://www.facebook.com/notes/751449002072082/> [<https://perma.cc/LS86-A943>] (last edited May 5, 2021).

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364. While Zuckerberg went on to claim that Meta had designed its algorithms to avoid this natural propensity of engagement-based algorithms, his claim to the public is belied by the extensive internal and external research indicating Meta’s platforms did amplify extreme material.

365. Other documents show that Meta’s employees also discussed their motive for changing the design of the algorithm—namely, that users began to interact less with the product, which became a worrisome trend for Meta’s bottom-line. Meta’s engagement-based algorithm (including its MSI variant) was designed to drive more engagement, which, in turn, helped Meta sell more of the digital ads that generated most of their revenue. In 2016, one Facebook Tech Lead wrote: “[W]e only cared about things like time spent, open links, etc. That’s what we optimized for. That’s what we used to define success and failure. And that’s the problem.”⁴⁶⁸

366. Meta intentionally designed its MSI-focused algorithms to collect and analyze several users’ data⁴⁶⁹ to predict what posts will capture users’ attention. Meta also tracks and utilizes data from various other sources, such as a users’ off-product activities and the activities on

⁴⁶⁸ Haugen_00001033 at Haugen_00001033.
⁴⁶⁹ Haugen_00017177 at Haugen_00017177.

1 websites that contain Facebook or Instagram “Like” or share buttons.⁴⁷⁰

2 367. Meta’s algorithmic ranking is utilized in a variety of product features that are
3 designed by Meta to maximize user engagement. For example, the Instagram product consists
4 primarily of a never-ending and user-specific Feed, which Instagram’s data-driven algorithms
5 generate for each user. In the app’s “Home” pane, this feed includes (but is not limited to) photos
6 and videos posted by Instagram users that the user has elected to “follow,” as well as
7 recommended photos and videos. In the app’s “Explore” pane, the feed consists almost
8 exclusively of photos and videos from users the user has *not* elected to “follow.” In both cases,
9 Instagram’s algorithms evaluate each user’s data to predict what material will maximize their
10 attention and time spent using the product, irrespective of what the user wants to see.

11 368. Other “recommendation” features that are similarly algorithmically powered to drive
12 compulsive use include Facebook’s Newsfeed, Instagram’s Feed, Instagram Reels, Facebook
13 Reels, Facebook Watch (and its “For You” page), Accounts to Follow, People You May Know
14 (introductions to persons with common connections or backgrounds), Groups You Should Join,
15 and Discover (recommendations for Meta groups to join).

16 369. While Meta has publicly attempted to cast MSI as making time spent on its
17 platforms more “meaningful,” MSI was just another way for Meta to increase user engagement on
18 Instagram and Facebook. While the feature increases the chance that product interaction will be
19 “meaningful” by Meta’s definition—more “Likes,” comments, and interactions—it does not
20 consider whether recommended posts are welcomed by the user. This sets up users who may have
21 rejected upsetting or dangerous posts to see more of the same, resulting in what Meta itself calls a
22 “horrible feedback loop / downward spiral.”⁴⁷¹ Also referred to as “feeding the spiral,”⁴⁷² the MSI

23
24 ⁴⁷⁰ Allen St. John, *How Facebook Tracks You, Even When You're Not on Facebook*, Consumer Reps.
25 (Apr. 11, 2018), <https://www.consumerreports.org/privacy/how-facebook-tracks-you-even-when-youre-not-on-facebook-a7977954071/>.

26 ⁴⁷¹ META3047MDL-003-00068860 at META3047MDL-003-00068860.

27 ⁴⁷² META3047MDL-003-00121808 at META3047MDL-003-00121808. Meta employees
28 sometimes refer to this “spiral” as a “rabbit hole”; *see also* META3047MDL-003-00077939 at
META3047MDL-003-00077939.

1 algorithm increases the likelihood that a user sees posts “that makes them feel bad, they engage
2 with it [even if only to reject it], and then their [user experience] is flooded w[ith] it.”⁴⁷³ Because
3 Meta’s algorithm prioritizes engagement above all else, any harmful feeling or impulse that users
4 have are amplified by Instagram—which becomes an echo chamber screaming their most
5 upsetting thoughts back at them.

6 370. This feedback-loop dynamic was cast into vivid reality when 14-year-old Molly
7 Russell took her own life.⁴⁷⁴ During an official inquest investigating the role that social media
8 platforms played in her death, the coroner found that:

9 The platform operated in such a way using algorithms as to result, in some
10 circumstances, of binge periods of images, video clips and text some of which were
11 selected and provided without Molly requesting them. These binge periods . . . are
12 likely to have had a negative effect on Molly The sites normalised her condition
13 focusing on a limited and irrational view without any counterbalance of normality.⁴⁷⁵

14 371. The coroner further observed that “[t]here was no age verification when signing up
15 to the on-line platform” and that Molly’s parents “did not have access, to the material being
16 viewed or any control over that material.”⁴⁷⁶

17 372. Disturbingly, years before Meta sent an executive to the inquest to tout its platforms
18 as “safe,” Meta had conducted internal research which warned that there was a risk of “similar
19 incidents like Molly Russell” due to the operation of algorithmic product features.⁴⁷⁷

20 373. Despite Molly’s death, and notwithstanding Meta’s research into dangerous
21 spirals—at one point dubbed the “Rabbithole project”—the company did nothing to stop harm to
22 its young users. Meta has been clear about the problem: “[O]ur recommendations algorithms will

22 ⁴⁷³ META3047MDL-003-00121808 at META3047MDL-003-00121808.

23 ⁴⁷⁴ Dan Milmo, *Social media firms ‘monetising misery’, says Molly Russell’s father after inquest*,
24 *Guardian* (Sept. 30, 2022), <https://www.theguardian.com/uk-news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-coroner>.

25 ⁴⁷⁵ Andrew Walker, *Regulation 28 Report to Prevent Future Deaths* at 2, ¶ 4, N. London Coroner’s
26 Serv. (Oct. 13, 2022), https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf.

27 ⁴⁷⁶ *Id.* at 3 ¶ 5.

28 ⁴⁷⁷ META3047MDL-003-00043617 at META3047MDL-003-00043644.

1 start pushing you down a rabbit hole[.]”⁴⁷⁸ They have been clear about potential solutions:
2 targeted changes to the algorithm do lead to meaningful changes.⁴⁷⁹ But they have been resistant
3 to making changes, citing an explicit, profit-minded reason that such tweaks “came with a clear
4 engagement cost[.]”⁴⁸⁰

5 **f. Meta’s dangerous and harmful features cause negative body image and**
6 **harmful impacts on youth mental health.**

7 374. Meta has known since at least 2018 that Instagram has a corrosive effect on the
8 mental health of pre-teen and teenage users.⁴⁸¹ Meta has an internal research team comprised of
9 employees with expertise in, *inter alia*, computer science, psychology, and quantitative and
10 qualitative analysis. In 2019, this team completed a “teen mental health deep dive” which included
11 focus groups, and online surveys. The study paired a survey of thousands of Instagram users with
12 data about the time each respondent spent on Instagram and the type of posts they viewed.⁴⁸²

13 375. The evidence collected by Meta’s research team is damning. Among other findings,
14 Defendants’ researchers learned that:

- 15 a. 41% of teen users of Instagram in the U.S. who reported feeling “[not] attractive” said
16 the feeling began while using the product;⁴⁸³

17 ⁴⁷⁸ META3047MDL-003-00077939 at META3047MDL-003-00077939; *see also* META3047MDL-
18 003-00068860 at META3047MDL-003-00068860; META3047MDL-003-00087111 at
19 META3047MDL-003-00087112 (acknowledging that a majority of “negative experiences” come
from algorithmically-powered features like explore and hashtags).

20 ⁴⁷⁹ META3047MDL-003-00077939.

21 ⁴⁸⁰ *Id.*

22 ⁴⁸¹ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
Kids, Documents Show, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
23 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) [<https://perma.cc/AK48-E6HH>]; META3047MDL-003-
00146240 at META3047MDL-003-00146256.

24 ⁴⁸² Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
Kids, Documents Show, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
25 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen_00017069; META3047MDL-003-00000029.

26 ⁴⁸³ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
Kids, Documents Show, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
27 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at META3047MDL-
28 003-00000043.

- 1 b. 32% of teenage girls said that when they felt bad about their bodies, Instagram made
2 them feel worse;⁴⁸⁴
- 3 c. "We make body image issues worse for 1 in 3 teen girls;"⁴⁸⁵
- 4 d. "Frequent social comparison is a key driver of subjective well-being and teens say
5 [Instagram] makes this problem worse;"⁴⁸⁶
- 6 e. One in five teens said that Instagram made them feel worse about themselves or their
7 mental health;⁴⁸⁷
- 8 f. Two-thirds of teen girls on Instagram experienced negative social comparison;⁴⁸⁸
- 9 g. 17% of teen girl Instagram users said the product made "[e]ating [i]ssues" worse;⁴⁸⁹
- 10 h. About a quarter of teens who reported feeling "[n]ot good enough" said the feeling
11 started on Instagram;⁴⁹⁰
- 12 i. About a quarter of teens said that Instagram undermined their confidence in the
13 strength of their friendships;⁴⁹¹
- 14 j. Teenagers who struggle with mental health said that Instagram worsened those

15 _____
16 ⁴⁸⁴ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram*
17 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
18 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen_00019219 at Haugen_00019226;
19 [META3047MDL-003-00001846](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) at [META3047MDL-003-00001852](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667).

18 ⁴⁸⁵ Haugen_00016699 at Haugen_00016707.

19 ⁴⁸⁶ Haugen_00019219 at Haugen_00019226.

20 ⁴⁸⁷ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram*
21 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
22 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen_00017069 at Haugen_00017091;
23 [META3047MDL-003-00000029](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) at [META3047MDL-003-00000049](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667).

22 ⁴⁸⁸ Haugen_00019219 at Haugen_00019226.

23 ⁴⁸⁹ Haugen_00020135 at Haugen_00020162.

24 ⁴⁹⁰ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram*
25 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
26 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); [META3047MDL-003-00000029](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) at [META3047MDL-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
27 [003-00000043](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667).

26 ⁴⁹¹ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram*
27 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
28 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); *Id.*

1 problems;⁴⁹²

2 k. “Teens blame Instagram for increases in the rates of anxiety and depression among
3 teens” in recent years—a response that was “unprompted and consistent across all
4 groups”;⁴⁹³

5 l. Among teens who reported suicidal thoughts, 13% of British users and 6% of
6 American users traced the desire to kill themselves to Instagram;⁴⁹⁴ and

7 m. 13.5% of teen girls on Instagram said the product made⁴⁹⁵ thoughts of “suicide and
8 self-injury” worse.⁴⁹⁶

9 376. Further, in Meta’s October 2019 *Teen Mental Health Deep Dive* research, which
10 surveyed over 2,500 teenagers who use Instagram on at least a monthly basis, Meta researchers
11 found that “[y]oung people are acutely aware that Instagram can be bad for their mental health, yet
12 are compelled to spend time on the app[.]”⁴⁹⁷

13 377. Meta’s researchers were clear in explaining that Instagram product features were
14 responsible for these problems. In one chart illustrating the “High” amount of “Body, Appearance
15 Comparison” on Instagram, researchers cited as contributing factors “Product mechanics
16 (addicting)” and “Explore, discover, stalk (down the rabbit hole)[.]”⁴⁹⁸ In another slide,
17 researchers noted the particular problems with Instagram’s Explore feature, as it contains “[t]ons
18

19 ⁴⁹² Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
20 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
[instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); *Id.* at META3047MDL-003-00000053.

21 ⁴⁹³ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
22 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
[instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); *Id.* at META3047MDL-003-00000052.

23 ⁴⁹⁴ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
24 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
[instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) ; *Id.* at META3047MDL-003-00000043.

25 ⁴⁹⁵ MDL AG Compl. at 37, ¶ 204.

26 ⁴⁹⁶ Haugen_00016699 at Haugen_00016707.

27 ⁴⁹⁷ Mass. AG Compl. at 34, ¶ 124.

28 ⁴⁹⁸ Haugen_00015958 at Haugen_00015987.

1 of body image triggers” that are “[i]ntimidating” to users.⁴⁹⁹

2 378. Children are developmentally unprepared for the psychological ramifications of peer
3 judgment and online comparisons.

4 379. Meta’s internal researchers were not only clear about the fact that Instagram causes a
5 high level of social comparison for teenagers; they were clear-eyed about the dire consequences.
6 They observed that the addictive nature of the Instagram product, combined with a pressure to
7 match unrealistic beauty ideals, can send teens into a downward spiral that includes anger,
8 withdrawal, insecurity, and body dysmorphia—“a series of emotions that in many ways mimic
9 stages of grief.”⁵⁰⁰ They further warned that “[u]sers[’] experience of [this] downward spiral is
10 exacerbated by our platform[.]”⁵⁰¹ “Comparisons on Instagram can change how young women
11 view and describe themselves,” they noted, changing a girl’s self-perception from “multi-
12 dimensional” and “centered” to “[n]ot in control,” “[d]ark,” “[b]oxed in,” “[l]ow esteem,” and
13 “[a]nxious.”⁵⁰² The researchers’ conclusions were stark: “Mental health outcomes related to this
14 can be severe” and can include “[e]ating [d]isorders,” “[b]ody [d]ysmorphia,” “[b]ody
15 [d]issatisfaction,” “[d]epression,” and “[l]oneliness.”⁵⁰³

16 380. Meta’s research demonstrates that social comparison is particularly bad on Instagram
17 where Meta fuels addiction to its platform by exploiting and monetizing tweens and teens’
18 susceptibility to body dissatisfaction and negative social comparison.⁵⁰⁴ The mental health of
19 tween and teen users bears the cost of Meta’s manufacturing and emphasizing influence and
20 celebrity.⁵⁰⁵ Meta knows as much. In 2020, its researchers found that exposure to “top accounts”

22 ⁴⁹⁹ *Id.* at Haugen_00015989.

23 ⁵⁰⁰ *Id.* at Haugen_00015985.

24 ⁵⁰¹ *Id.* at Haugen_00015990.

25 ⁵⁰² *Id.* at Haugen_00015983.

26 ⁵⁰³ *Id.* at Haugen_00015992.

27 ⁵⁰⁴ *See* Haugen_00015958 at Haugen_00015996.

28 ⁵⁰⁵ Haugen_00002527 at Haugen_00002555–Haugen_00002556, Haugen_00002564–
Haugen_00002565.

1 (i.e., those with the top 0.1% follower counts) was most associated with negative comparison and
2 that Instagram’s influence-driven algorithms ensure top accounts comprise almost half of all
3 material viewed on the platform.⁵⁰⁶

4 381. Score-keeping features designed into Instagram amplify these problems and the
5 resulting compulsive and problematic use. Teenage girls are particularly impacted when
6 comparing “Like” counts, follower counts, views, and comments on their posts to those of models,
7 celebrities, and so-called influencers. Meta’s internal research reveals that teen girls are eight
8 times more likely to engage in negative social comparison than their male counterparts.⁵⁰⁷

9 382. Instagram compounds the foregoing problems with yet another pernicious feature—
10 image “filters” that allow users to engage in selective self-presentation by altering their
11 appearance in photos and videos. These filters allow facial structure alteration, body slimming,
12 skin lightening, skin tanning, blemish clearing, the artificial overlap and augmentation of makeup,
13 and other beautification “improvements.”⁵⁰⁸ These filters have harmed young users in multiple
14 ways, both independently and in concert with Instagram’s other harmful features, all in the name
15 of increased user engagement.⁵⁰⁹

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20 ⁵⁰⁶ META3047MDL-003-00159559 at META3047MDL-003-00159560; *see also* Haugen_00002527
at Haugen_00002555.

21 ⁵⁰⁷ Haugen_00017263 at Haugen_00017263.

22 ⁵⁰⁸ *See, e.g.,* Tanyel Mustafa, *An ‘Instagram Vs Reality’ filter is showing how toxic photo editing can*
23 *be*, Metro (Apr. 30, 2021), [https://metro.co.uk/2021/04/30/an-instagram-vs-reality-tool-is-showing-](https://metro.co.uk/2021/04/30/an-instagram-vs-reality-tool-is-showing-how-toxic-filters-can-be-14498265/)
24 *how-toxic-filters-can-be-14498265/*; Mariska Kleemans *et al.*, *Picture Perfect: The Direct Effect of*
Manipulated Instagram Photos on Body Image in Adolescent Girls, 21 *Media Psych.* 93–110, 98
(2016), <https://www.tandfonline.com/doi/pdf/10.1080/15213269.2016.1257392>.

25 ⁵⁰⁹ Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*
26 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),
27 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
28 [how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
[<https://perma.cc/Z8RQ-TC49>].



10
11 383. *First*, the easy accessibility of filters, combined with features such as “Likes,”
12 encourages adolescents to artificially change their appearance.⁵¹⁰ As noted, adolescents naturally
13 seek social validation. When they notice increased interaction and favorable responses to their
14 filter-edited photos (more “Likes” and “comments”), many are led to believe they are only
15 attractive when their images are edited.⁵¹¹ These young people, including youth in NYC Plaintiffs’
16 schools and community, begin to prefer how they look using filters, not as they appear
17 naturally.⁵¹² In a 2016 study, 52% of girls said they use image filters every day, and 80% have
18 used an app to change their appearance before age 13.⁵¹³ Meta’s own findings showed teen girls
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21 ⁵¹⁰ Tate Ryan-Mosley, *Beauty filters are changing the way young girls see themselves*, MIT Tech.
22 Rev. (Apr. 2, 2021), <https://www.technologyreview.com/2021/04/02/1021635/beauty-filters-young-girls-augmented-reality-social-media/amp/>.

23 ⁵¹¹ *Id.*

24 ⁵¹² Pooja Shah, *How Social Media Filters Are Affecting Youth*, Parents (Apr. 28, 2022),
25 <https://www.parents.com/kids/health/childrens-mental-health/how-social-media-filters-are-affecting-youth/>.

26 ⁵¹³ Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*
27 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),
28 <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>
[<https://perma.cc/Z8RQ-TC49>].

1 spend hours editing images by altering their appearance before posting on Instagram,⁵¹⁴ and that
2 “teen girls in particular” are “some of the biggest users of these filters.”⁵¹⁵ Pictures must be
3 “Instagrammable” to be worthy of posting.

4 384. *Second*, Instagram causes youth to compare their real-life appearances to the edited
5 appearances only achievable by filters and Meta’s tools.⁵¹⁶ These false and unrealistic body image
6 standards further lead teenagers like NYC Plaintiffs’ students to develop negative perceptions of
7 their appearance. Seventy-seven percent of girls reported trying to change or hide at least one part
8 of their body before posting a photo of themselves, and 50% believe they did not look good
9 without editing.⁵¹⁷

10 385. *Third*, the specific changes filters make to an individual’s appearance can cause
11 negative obsession or self-hatred surrounding aspects of their appearance.⁵¹⁸ The filters alter
12 specific facial features such as eyes, lips, jaw, face shape, and slimness, which often require
13 medical intervention to alter in real life.⁵¹⁹ The pervasiveness of Meta-designed filters through the
14 algorithm permeates Instagram and cause adolescent users to negatively compare their real
15 appearances against a false physical reality.⁵²⁰ In one recent study, even users who reported a
16 higher initial self-esteem level felt they looked 44% worse before their image was edited using a
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18 ⁵¹⁴ See Haugen_00019219 at Haugen_00019255; Haugen_00019257–Haugen_00019259.

19 ⁵¹⁵ META3047MDL-003-00157020 at META3047MDL-003-00157020–META3047MDL-003-
00157021.

20 ⁵¹⁶ See Haugen_00019219 at Haugen_00019255 (explaining that users forget that Instagram only
21 shows the highlights of people’s lives and is not depicting reality).

22 ⁵¹⁷ Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*
Changing The Way We See Ourselves, Forbes (Apr. 27, 2021),
23 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
[how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)
24 [<https://perma.cc/Z8RQ-TC49>].

25 ⁵¹⁸ Tonya Russell, *Social Media Filters Are Changing How Young People See Themselves*, Teen
Vogue (Jan. 25, 2022), [https://www.teenvogue.com/story/social-media-filters-how-young-people-](https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp)
26 [see-themselves/amp](https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp).

27 ⁵¹⁹ *Id.*

28 ⁵²⁰ *Id.*

1 filter.⁵²¹ “[W]hen the . . . filter increased the gap between how participants wanted to look and
2 how they felt they actually looked, it reduced their self-compassion and tolerance for their own
3 physical flaws.”⁵²² As one psychodermatologist summed it up: “[T]hese apps subconsciously
4 implant the notion of imperfection and ugliness, generating a loss of confidence[.]”⁵²³

5 386. *Fourth*, Meta intentionally designed its platforms to not alert adolescent users when
6 images have been altered through filters or edited. Meta has therefore designed its platforms so
7 that users, including youth in NYC Plaintiffs’ schools and community, cannot know which images
8 are real and which are fake, deepening obsessive, negative appearance comparison.

9 387. *Fifth*, Meta uses social comparison to keep young users engaged with and addicted
10 to its platforms.

11 388. Heavily edited and unrealistic beauty, modeling, fitness, talent, and success related
12 posts are highly amplified by Meta’s algorithms, especially on the Feeds of young users.

13 389. Social comparisons on social media are frequent and are especially likely to be
14 upward, as social media provides a continuous stream of information about other people’s
15 accomplishments. Research suggests that social comparisons occur automatically; when
16 individuals encounter information about another person, their self-perceptions will be affected.
17 The sheer number of posts in a News Feed, each offering a thumbnail sketch of each person’s
18 carefully curated and predominantly ostentatious lives, yields numerous opportunities for social
19 comparison. Although people do not typically post false information about themselves online,
20 they engage in selective self-presentation. As a result, individuals browsing their News Feeds are
21 more likely to see posts about friends’ exciting social activities rather than dull days at the office,
22 affording numerous opportunities for comparisons to people seemingly better-off. Individuals with
23 vacillating levels of self-esteem and certitude, characteristics notoriously endemic to the

24 ⁵²¹ Ana Javornik *et al.*, *Research: How AR Filters Impact People’s Self-Image*, Harv. Bus. Rev.
25 (Dec. 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

26 ⁵²² *Id.*

27 ⁵²³ Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn’t Be*
28 *Ignored – Here’s Why*, InStyle (Sept. 14, 2022), <https://www.instyle.com/beauty/social-media-filters-mental-health>.

1 adolescent cohort, are particularly oriented to making frequent and extreme upward social
2 comparisons on social media. Social-media-induced social comparison often results in a
3 discrepancy between the ideal self and the real self, thus evoking a sense of depression,
4 deprivation, and distress, resulting in an overall aggravation of a person’s mental state. Since the
5 early 2000s, studies have shown that frequent upward social comparison results in lower self-
6 esteem and reduced overall mental health. It is well-established that individuals who are more
7 likely to engage in self-comparison are likewise more likely to suffer harm when using social
8 media. Meta’s design choices have amplified this dynamic to psychologically harmful levels, as
9 discussed in further detail below.

10 390. The impact of the negative social and appearance comparison caused by Meta’s
11 design choices is profound. Instagram-induced social comparison creates a schism between the
12 ideal self and the real self, leading to distress and depression. Filters, especially in combination
13 with other product features, cause body image issues, eating disorders, body dysmorphia, and
14 related harms.⁵²⁴

15 391. Again, Meta has long been aware of the harms Instagram inflicts on youth by
16 perpetuating social comparison. In one study from 2019, teens explained that Instagram harms
17 their mental health by creating pressure to conform to social stereotypes, the need for validation
18 through views, “Likes” and followers, and the over-sexualization of girls.⁵²⁵ These and other
19 harmful impacts were associated with isolation, adopting unhealthy habits, depression, anxiety,
20 insecurity, and loneliness.⁵²⁶

21 ⁵²⁴ See Sian McLean *et al.*, *Photoshopping the selfie: Self photo editing and photo investment are*
22 *associated with body dissatisfaction in adolescent girls*, 48 *Int’l J. Eating Disorders* 1132–1140,
23 1133 (2015), <https://pubmed.ncbi.nlm.nih.gov/26311205/> [<https://perma.cc/PE83-EKV4>] (presenting
24 a 2015 study involving 101 adolescent girls, which found that more time spent editing and sharing
25 selfies on social media raised their risk of experiencing body dissatisfaction and disordered eating
26 habits); Scott Griffiths *et al.*, *The Contribution of Social Media to Body Dissatisfaction, Eating*
Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men, 21 *Cyberpsychology,*
27 *Behav., & Soc. Networking* 149–156, 149 (2018),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/pdf/cyber.2017.0375.pdf>.

27 ⁵²⁵ Haugen_00017069 at Haugen_00017122.

28 ⁵²⁶ *Id.* at Haugen_00017126.

1 392. In its “Social Comparison Exploratory Research” conducted in 2020, Meta
2 acknowledged that body image comparisons are formed in part by its features—filters that flood
3 its app with seemingly unattainable looks like flawless skin, made worse by posters “using
4 hashtags like no-filters but actually using filters.”⁵²⁷ Meta’s researchers found that nearly half of
5 teen girls on Instagram feel like they often or always compare their appearance to others using the
6 product, and more than one-third feel extreme pressure to look perfect on Instagram.⁵²⁸ In a
7 related survey, Meta found that around the age of 30, the role of Instagram in social comparison
8 begins to diminish.⁵²⁹

9 393. According to research conducted by Meta in 2019, over 60% of teens believe
10 Instagram should help them address the effects of social comparison by recommending positive
11 accounts, reprioritizing their feeds to promote things that make users feel good, and help them
12 follow a balance of accounts.⁵³⁰ Most users wished Instagram gave them better user
13 controls.⁵³¹ Yet a survey conducted two years later revealed that Meta had done little to address its
14 users’ concerns. Topics that elicited social comparison still encompassed over one-third of teen
15 girls’ feeds. And for every post from a friend that appeared in a teen girl’s feed, Instagram’s
16 algorithm drove five times as many posts from the top 0.1% of popular accounts.⁵³²

17 394. One slide from Meta’s study of social comparison offers a particularly succinct
18 summation of how the various features built into Instagram “exacerbate each other to create a
19 perfect storm.”⁵³³ “Posting ‘For the Gram’” creates a “Pressure to Look Perfect.”⁵³⁴ The ability of

20
21 ⁵²⁷ See *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*
22 *U.S.* at 18, Wall St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-body-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)
23 [image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen_00015958 at Haugen_00015971–
24 Haugen_00015977.

25 ⁵²⁸ Haugen_00007080 at Haugen_00007082.

26 ⁵²⁹ *Id.* at Haugen_00007095.

27 ⁵³⁰ Haugen_00017069 at Haugen_00017145.

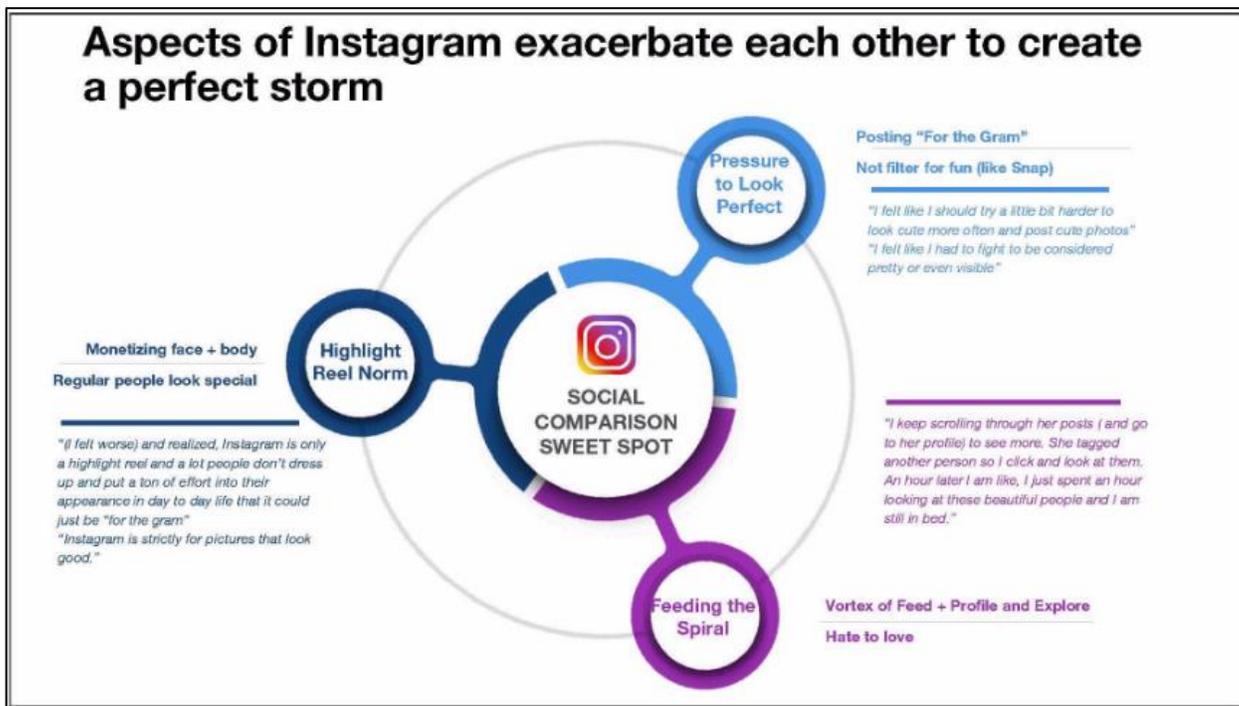
28 ⁵³¹ Haugen_00020135 at Haugen_00020137, Haugen_00020171.

⁵³² Haugen_00002527 at Haugen_00002529, Haugen_00002555.

⁵³³ See *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*
U.S. at 33, Wall St. J. (Sept. 29, 2021), <https://s.wsj.net/public/resources/documents/teen-girls-body->
(footnote continued)

1 influencers to “Monetiz[e] face + body” creates a “Highlight Reel Norm.”⁵³⁵ And the “Vortex of
 2 Feed + Profile and Explore” promotes a “Hate to love” dynamic for users, which “*Feed[s] the*
 3 *Spiral*” of compulsive use.⁵³⁶ Taken together, these three features—all driven by design features
 4 of Instagram—create a “Social Comparison Sweet Spot.”⁵³⁷

5 ///



18 395. Meta understands that the social comparison it knowingly promotes through
 19 appearance filters creates compulsive behavior among child users, especially when paired with

20 _____
 21 image-and-social-comparison-on-instagram.pdf; Haugen_00015958 at Haugen_00015991.

22 ⁵³⁴ See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the*
 23 *U.S.* at 33, Wall St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-body-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)
 24 [image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf).

25 ⁵³⁵ See *id.*; Haugen_00015958 at Haugen_00015991.

26 ⁵³⁶ *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.*
 27 at 33, Wall St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-body-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)
 28 [image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen_00015958 at Haugen_00015991.

⁵³⁷ See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the*
U.S. at 33, Wall St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-body-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)
[image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen_00015958 at Haugen_00015991.

1 other features such as “Likes” and algorithmic recommendations. Specifically, Meta knows that
2 “[s]ocial comparison creates a negative feedback loop[.]”⁵³⁸ Its internal research reveals that, as
3 teens compare themselves to others, their self-doubt grows, which in turn heightens the degree of
4 attention they give to feelings of doubt and worthlessness and to negative aspects of themselves.
5 As these effects compound, teens experience depression and anxiety, making them more
6 vulnerable and susceptible to addiction to Meta’s platforms.⁵³⁹ Meta observed that long-term,
7 constant self-critique and scrutiny permanently shape how teens view themselves in all
8 relationships, on and offline.⁵⁴⁰ Moreover, they found that the incessant social pressure Instagram
9 inflicted on teens led “to obsessive control of what goes on social media and often to attention-
10 seeking [behavior] (often in negative ways)” to obtain social validation.⁵⁴¹ In other words,
11 Instagram’s design features resulted in an insidious cycle of harm where teens believed they could
12 only find reprieve by increased Instagram use.

13 396. Meta has the technological capabilities to mitigate social comparison harms
14 significantly, but actively chooses to ignore leading research (including its own) and its product
15 engineers’ recommendations. One internal presentation recommended several “[t]argeted
16 [i]nterventions” for changes to Instagram that could mitigate these harms, such as a
17 recommendation that users take a break during a long use session.⁵⁴² In another, computational
18 social researchers and engineers at Meta proposed numerous, feasible product design changes,
19 including: demotions on Explore and Reels using topic and image and video features from an
20 FBLeaerner model, separating top-account feed from close-friend feed, and not recommending
21 celebrities to follow that post primarily fashion/beauty material as users “can find these accounts
22 on their own, but [Meta] shouldn’t amplify their influence through recommendations.”⁵⁴³

23 _____
⁵³⁸ Haugen_00017069 at Haugen_00017127.

24 ⁵³⁹ *Id.* at Haugen_00017127–Haugen_00017128.

25 ⁵⁴⁰ *See id.* at Haugen_00017128.

26 ⁵⁴¹ *Id.* at Haugen_00017130.

27 ⁵⁴² Haugen_00019219 at Haugen_00019272.

28 ⁵⁴³ Haugen_00002527 at Haugen_00002565.

1 397. Despite its vast knowledge of the harms that Instagram’s features were causing to
2 adolescents, in Meta’s 2021 Milestone Tracker, the action item of reducing the negative effects
3 from social comparison through controls had yet to be started.⁵⁴⁴ In other words, despite
4 awareness that the deliberate design of Instagram was drastically damaging teen mental and
5 physical health, Meta ignored the problem, failing to implement its own researchers’
6 recommendations.

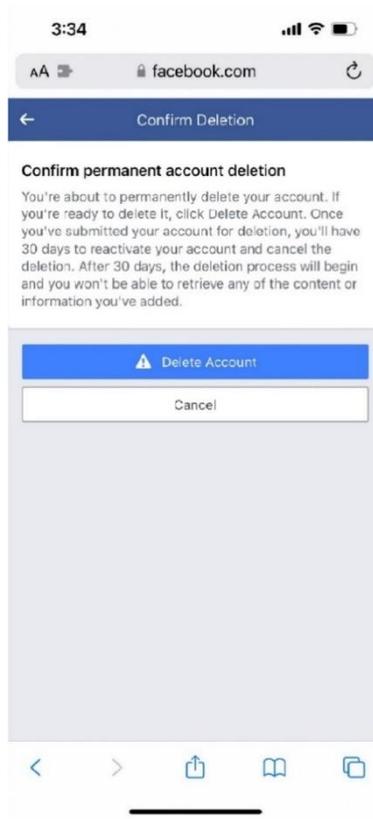
7 **g. Facebook’s and Instagram’s dangerous and harmful features include**
8 **impediments to discontinuing use.**

9 398. Once the addicted child realizes the injury Meta’s platforms are inflicting, and wants
10 to quit using, Meta shifts the full force of its genius product design teams to prevent the child’s
11 escape. Meta has intentionally designed its platforms so that adolescent users face significant
12 navigational obstacles and hurdles when trying to delete or deactivate their accounts, in stark
13 contrast to the ease with which users can create those accounts.

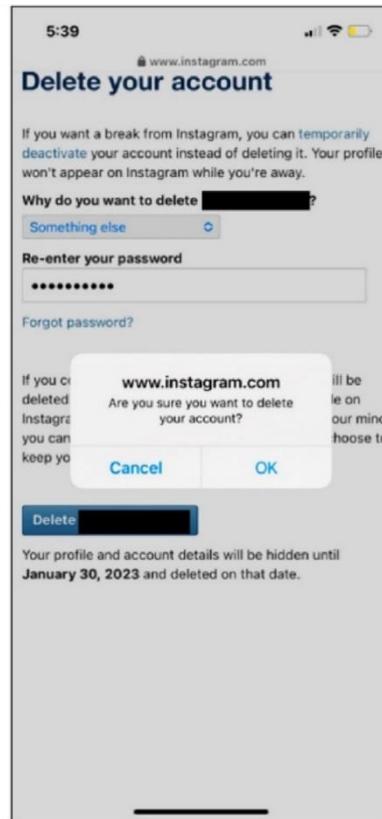
14 399. To delete or deactivate an Instagram or Facebook account, a user must locate and tap
15 on approximately seven different buttons (through seven different pages and popups) from the
16 main feed. Some users have undoubtedly given up in their attempt to quit because it was too
17 difficult to navigate through the interface to completion.

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27 _____
28 ⁵⁴⁴ Haugen_00025741 at Haugen_00025763.

1 400. Even if a user successfully navigates these seven pages, Meta still won't
2 immediately delete their account. Instead, Meta preserves the account for 30 days. If at any time
3 during those 30 days a user's addictive craving becomes overwhelming and they access the
4 account again, the deletion process starts over. The user must go through all the above steps again,
5 including the 30-day waiting period, if they again wish to delete their account.



(Facebook Final Deletion Screen February 2023)



(Instagram Final Deletion Screen, January 2023)(account name redacted)

21 401. Moreover, the deletion process includes what Meta readily acknowledges are
22 “aggressive” attempts to dissuade users from deleting their accounts.⁵⁴⁵ Before a user can delete
23 their Facebook account, Meta “lists some of your friends to remind you that they will no longer be
24 able to contact you through the site and more importantly, [requires] the user to choose a reason
25 for why they’re leaving.”⁵⁴⁶ Meta also requires users attempting to leave Instagram to select a

26 ⁵⁴⁵ Haugen_00016893 at Haugen_00016898.

27 ⁵⁴⁶ *Id.*

1 reason why they are leaving.

2 402. As an additional barrier to deletion, Meta urges users of both platforms to deactivate,
3 rather than delete, their accounts. For example, Instagram users who choose to delete their
4 accounts are immediately shown a screen with their profile picture and asked: “Deactivate your
5 account instead of deleting?” The option to deactivate is conspicuously highlighted. Similarly,
6 Facebook displays a screen that automatically selects the option of deactivating rather than
7 deleting a user account.

8 403. Meta’s aggressive efforts to prevent users from discontinuing their use of Facebook
9 and Instagram is particularly problematic because unsuccessful efforts to discontinue use are a
10 hallmark of addiction, incorporated as the sixth criteria in the *Bergen Social Media Addiction*
11 *Scale*, discussed above.

12 **4. Meta has concealed from NYC Plaintiffs, the public, and Congress the harmful**
13 **effects that Instagram’s and Facebook’s design have on children.**

14 404. Meta represents to the public that it prioritizes safety. At the same time, Meta has
15 engaged in a years-long pattern of concealing critical information about the safety of Instagram
16 and Facebook from the public, including NYC Plaintiffs and the youth in NYC Plaintiffs’
17 communities. In one internal document from February 2018, employees at Meta communicated
18 about how best to “refin[e] counter-messaging around the addiction narrative that’s been
19 propagating.”⁵⁴⁷ This effort to conduct “message testing around addiction PR responses” included
20 the ideas that “[t]he whole dopamine thing is completely made up and based on no research,”
21 “[t]here’s no agreement on what is meant by addiction,” and (contradictorily) “[w]e’re taking it
22 seriously, doing research, [and] launching new tools to help people[.]”⁵⁴⁸

23 405. Meta knew that none of this was true. For instance, in the summer of 2019,
24 Zuckerberg met with a psychologist and leading expert on the mental health effects of social
25 media on young people. This leading expert countered Zuckerberg’s contention that harms from

26 ⁵⁴⁷ META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-
27 00082166.

28 ⁵⁴⁸ *Id.*

1 social media are trivial and explained how, to the contrary, Instagram and other platforms have
2 been a major contributor to the spike in young girls’ mental health problems since 2012. The
3 psychologist addressed his research “on the dramatic rise in rates of teenage anxiety, depression,
4 and self-harm” and explained how the research on social media’s role “points heavily to a
5 connection, not just from correlational studies but from true experiments, which strongly indicate
6 causation, not just correlation.”⁵⁴⁹

7 406. Instead of “taking [this] seriously” and “launching new tools” to protect kids,⁵⁵⁰
8 Meta did the opposite. By late 2019, Meta’s “mental health team stopped doing things[,]” “it was
9 defunded” and “completely stopped[.]”⁵⁵¹ And, as noted, Meta allowed safety tools it knew were
10 broken to be held out as fixes. All the while, Meta ignored cries from their well-being researchers
11 to aggressively confront its youth safety problem: “[T]here’s so much more we could have done
12 here. . . . [But] there was the explicit decision last half not to fund this anymore.”⁵⁵² And Meta
13 even internally researched the extent of its platforms’ harmful effects on youth mental health.

14 407. In June 2018, an internal presentation recognized that “[i]t may be a problem if
15 Facebook seems rewarding [to users] based on the principle of unpredictability, while the inherent
16 value of the reward is lacking.”⁵⁵³ This includes “[n]otifications with little or no relevance, and
17 that come at unpredictable times.”⁵⁵⁴ The same document warned that dopamine “rewards
18 available through Facebook may contribute to problems for some people.”⁵⁵⁵

19 408. For example, in October 2019, Meta conducted a “Teen Mental Healthy Deep Dive”
20 to “get a nuanced understanding of teens’ perception of how Instagram effects their mental

21 _____
⁵⁴⁹ META3047MDL-003-00089174 at META3047MDL-003-00089176.

22 ⁵⁵⁰ META3047MDL-003-00082165 at META3047MDL-003-00082165.

23 ⁵⁵¹ META3047MDL-003-00011697 at META3047MDL-003-00011698; *see also* META3047MDL-
24 003-00103260 at META3047MDL-003-00103260 (referencing “the explicit decision last half to not
fund [protective measures against problematic use] anymore”).

25 ⁵⁵² *See* META3047MDL-003-00103260.

26 ⁵⁵³ MDL AG Compl. at 30, ¶ 164.

27 ⁵⁵⁴ *Id.*

28 ⁵⁵⁵ *Id.*

1 health.”⁵⁵⁶ The results of this research showed that Instagram’s teen users “have an addicts’
2 narrative about their use,” “recognize the amount of time they spend online isn’t good for them,”
3 “but at the same time know they lack the willpower to control the time spent themselves.”⁵⁵⁷

4 409. Similarly, in June 2020, Meta’s Senior User Experience (“UX”) Researcher noted in
5 an internal report: *What Makes Teens Tick?*, that “our own product foundation research has shown
6 teens are unhappy with the amount of time they spend on our app” and that “[d]ue to the immature
7 [teen] brain, they have a much harder time stopping even though they want to.”⁵⁵⁸ The report
8 further noted that because “[t]een brains are much more sensitive to dopamine,” the risk of
9 “addiction” is higher and that is what “keeps them scrolling and scrolling.”⁵⁵⁹

10 410. The presentation also noted teens often go down “rabbit holes” because of the
11 “especially ‘plastic’” nature of their brains, and asked how Instagram could satisfy “teen[s]’
12 insatiable appetite for novelty” through features on the app.⁵⁶⁰ The presentation further discussed
13 teens’ “increased sensitivity” and “concerns about being judged,” along with teens’ desire for
14 reward, which “makes them predisposed to impulse, peer pressure, and potentially harmful risky
15 behavior.”⁵⁶¹

16 411. Meta has researched and analyzed addictive or “problematic use” reported by young
17 users on its platforms. According to Meta’s 2019 research: *Hard Life Moments—Mental Health*
18 *Deep Dive*, which studied “the reach, intensity, [and] impact of Instagram” “[a]cross 13 mental
19 health and well-being issues,” “[over 30% of users across age cohorts” told Meta that “Instagram
20 made problematic use worse.”⁵⁶² Meta researchers defined “problematic use” as “when people feel
21 a lack of control over how they use technology, and this leads to negative life impact (e.g., sleep,

22 _____
23 ⁵⁵⁶ Mass. AG Compl. at 37, ¶ 135.

24 ⁵⁵⁷ *Id.*

25 ⁵⁵⁸ *Id.* at ¶ 136.

26 ⁵⁵⁹ *Id.*

27 ⁵⁶⁰ MDL AG Compl. at 66, ¶ 407.

28 ⁵⁶¹ *Id.*

⁵⁶² Mass. AG Compl. at 37, ¶ 137.

1 parenting, social relationships, or productivity).”⁵⁶³ An internal presentation also showed that
2 55% of Facebook’s U.S. users suffered from problematic use, which Meta described as “serious”
3 and as having “negative impacts on sleep, relationships, work, or lives.”⁵⁶⁴ Another internal Meta
4 post from July 2018 showed that problematic use was highest among teens and people in their
5 twenties.⁵⁶⁵

6 412. Meta also knows young users’ physical health is harmed by compulsive
7 “problematic use” induced by its platform design features. Specifically, Meta’s researchers noted
8 that “sleep problems” can “be part of [Facebook] addiction” and confirmed “it is true that negative
9 impacts on sleep is one possible outcome of problematic social media use.”⁵⁶⁶ Another data
10 scientist explained “the only insight I see . . . is that teens are really into using [Instagram] at
11 11pm when they probably should be sleeping[]” and “it is true that negative impacts on sleep is
12 one possible outcome of problematic social media use (or even non-problematic use).”⁵⁶⁷

13 413. In February 2019, Meta’s VP of Research, David Ginsberg circulated a summary of
14 external and internal research on Instagram and “Teen Well-Being” to executives, including then-
15 COO Sheryl Sandberg and Head of Instagram Adam Mosseri, that acknowledged “[w]hen social
16 media use displaces sleep in adolescents (via nighttime social media use), it is negatively
17 correlated to indicators of mental health.”⁵⁶⁸

18 414. Moreover, Meta knows that its addictive features, such as infinite scroll, and autoplay
19 in Stories and Reels, harm young users because they encourage passive consumption. As one
20 Meta employee stated in October 2021, “because [Stories are] so passive—you can just sit there
21 and watch without interacting with the poster or other people much, and we know that passive
22

23 ⁵⁶³ *Id.*

24 ⁵⁶⁴ MDL AG Compl. at 90–91, ¶ 539.

25 ⁵⁶⁵ *Id.*

26 ⁵⁶⁶ Mass. AG Compl. at 38, ¶ 138.

27 ⁵⁶⁷ MDL AG Compl. at 91, ¶ 542.

28 ⁵⁶⁸ Mass. AG Compl. at 38, ¶ 139.

1 consumption is generally worse for wellbeing.”⁵⁶⁹

2 415. Based on its own research, Meta found that “passive consumption—passively
3 watching videos, [and] scrolling [is] not associated w[ith] well-being [and is] more negative
4 psychologically” compared with “active engagement.”⁵⁷⁰

5 416. Meta is also aware of the effect its platforms have on teens experiencing negative
6 social comparison. For example, Meta researchers concluded that a “majority of teen girls
7 experience negative social comparison and a significant share of them think [Instagram] makes it
8 worse.”⁵⁷¹ Similarly, Meta knows that 13.5% of teen girls on Instagram say the platform makes
9 thoughts of suicide and self-injury worse.⁵⁷² Further, in a January 2020 study Meta conducted, it
10 noted that social comparison is “higher among younger than older people. Younger people are
11 more susceptible to peer influence and social comparison.”⁵⁷³

12 417. Three months later, Meta conducted another study revealing 1 in 4 people “think that
13 Instagram makes social comparison worse” and that “[s]eeing high Like counts is associated with
14 feeling worse (more negative, less positive comparison).”⁵⁷⁴

15 418. Instagram researchers have also observed that “[s]ocial comparison exacerbates
16 problems teens are dealing with” in that “[a]lthough others’ behaviors online can hurt, the self-
17 scrutiny and anxiety associated with personal consumption patterns is more damaging to mental
18 health.”⁵⁷⁵

19 419. In addition to knowing that social comparison exacerbates teens’ mental health
20 problems, Meta also knows through an internal report that “social comparison was also associated
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22 _____
23 ⁵⁶⁹ Mass. AG Compl. at 38, ¶ 140.

24 ⁵⁷⁰ MDL AG Compl. at 69, ¶ 421.

25 ⁵⁷¹ MDL AG Compl. at 37, ¶ 203.

26 ⁵⁷² *Id.* at ¶ 204.

27 ⁵⁷³ MDL AG Compl. at 42, ¶ 233.

28 ⁵⁷⁴ *Id.* at ¶ 234.

⁵⁷⁵ MDL AG Compl. at 38, ¶ 207.

1 with greater time spent” on Meta’s platforms.⁵⁷⁶ Indeed, Meta’s researchers stated they were
2 “confident of a causal link between [seeing] Like counts and social comparison.”⁵⁷⁷ And an
3 internal email from 2020 explains that “[Meta] know[s] from previous internal and external
4 research that social comparison is linked to multiple negative well-being outcomes (e.g., increased
5 loneliness, worse body image, and negative mood or affect)[.]”⁵⁷⁸

6 420. A 2021 internal presentation also notes that teens suffer from “constant negative
7 comparisons” on Instagram because Meta recommended triggering content to them and continued
8 showing them Like counts.⁵⁷⁹ Other internal documents reflect that “the mechanics of Instagram
9 amplify the impact of social comparison.”⁵⁸⁰

10 421. Despite knowing better, Meta’s high-ranking executives then began pushing
11 intentionally misleading talking points to the public. Instead of informing the public about Meta’s
12 internal research demonstrating Instagram’s and Facebook’s negative impacts on the health and
13 well-being of the nation’s youth, Meta repeatedly omitted key facts and misrepresented its
14 platforms in service of an overall message touting the safety of its platforms for children.

15 422. Because of Meta’s concealment, NYC Plaintiffs, NYC Plaintiffs’ students, the
16 public, and Congress were left in the dark and reasonably relied on Meta’s reassurances. Had
17 Meta disclosed the truth regarding its platforms, NYC Plaintiffs may not have suffered the harms
18 they did, and the harms they continue to suffer resulting from youth use of Meta’s platforms.
19 Instead, Meta pursued a knowing pattern of concealment to NYC Plaintiffs’ detriment.

20 423. In the year leading up to Meta’s acquisition of Instagram, Meta publicly
21 acknowledged its duty to children and worked to create false expectations about its platforms’
22 safety. For example:

23 a. Zuckerberg (3/25/2011): “So, we’re really focused on, on safety, especially children’s

24 ⁵⁷⁶ MDL AG Compl. at 41, ¶ 229.

25 ⁵⁷⁷ *Id.* at ¶ 231.

26 ⁵⁷⁸ MDL AG Compl. at 42, ¶ 232.

27 ⁵⁷⁹ *Id.* at ¶ 236.

28 ⁵⁸⁰ MDL AG Compl. at 45, ¶ 259.

1 safety. So we're having folks under the age of 18, um we, we just take a lot of extra
2 precautions for it, to make sure that it's just a safe environment for them um, to use
3 this service that you know, the default for, for people sharing things isn't that they're
4 sharing with everyone but that they're sharing with a smaller community But I
5 think, I think that's a lot of it. We really try to build a safe environment. Um, and um,
6 that's gonna be the key long term."⁵⁸¹

7 b. Zuckerberg (3/25/2011): "Right, and they, they feel like Facebook is this really secure
8 place and that it's a hundred percent safe, and um, we're always thinking about little
9 and big things like that that we can do to keep it safe for, for the people who use our
10 service."⁵⁸²

11 c. Zuckerberg (5/25/2011): "I mean, we do not allow people under the age of 13 to sign
12 up and I think if we ever were, we would need to try to figure out a lot of ways to
13 make sure that they were safe, right, because that's just extremely important and
14 that's just not the top of the list in terms of things for us to figure out right now."⁵⁸³

15 424. Following Meta's acquisition of Instagram, high-ranking executives continued to
16 make public pronouncements about the safety of Meta's platforms, including, but not limited to,
17 the following statements:

18 a. Zuckerberg (12/1/2015): "We will do our part to make this [better world] happen, not
19 only because we love you, but also because we have a moral responsibility to all
20 children in the next generation."⁵⁸⁴

21 b. Zuckerberg (4/10/2018): "Congressman, we have a number of measures in place to
22 protect minors specifically. We make it so that adults can't contact minors who they -

23 ⁵⁸¹ *Mark Zuckerberg at BYU with Senator Orrin Hatch*, YouTube (Mar. 25, 2011),
24 <http://www.youtube.com/watch?v=zRsbW0mmvNo>.

25 ⁵⁸² *Id.*

26 ⁵⁸³ *Maurice Levy, Conversation with Mark Zuckerberg at E-G8 Forum*, YouTube (May 25, 2011),
<http://www.youtube.com/watch?v=Gy0bq9FAJR>.

27 ⁵⁸⁴ *Mark Zuckerberg*, Facebook (Dec. 1, 2015),
28 <https://www.facebook.com/zuck/posts/10153375081581634> [<https://perma.cc/W99E-QTZQ>].

1 they aren't already friends with. We make it so that certain content that may be
2 inappropriate for minors, we don't show."⁵⁸⁵

- 3 c. Zuckerberg (4/10/2018), when asked by members of the U.S. Senate Committee on
4 Commerce, Science, and Transportation whether his companies "[h]ire consulting
5 firms to help them figure out how to get more dopamine feedback loops so that
6 people don't want to leave the platform[.]" responded: "No . . . that's not how we talk
7 about this or how we set up our product teams. We want our products to be valuable
8 to people, and if they're valuable, then people choose to use them."⁵⁸⁶
- 9 d. Zuckerberg (7/12/2018): "There are really two core principles at play here. There's
10 giving people a voice, so that people can express their opinions. Then, there's keeping
11 the community safe, which I think is really important."⁵⁸⁷
- 12 e. Zuckerberg (7/25/2018): "[W]e will continue to invest heavily in security and privacy
13 because we have a responsibility to keep people safe. But as I've said on past calls,
14 we're investing so much in security that it will significantly impact our
15 profitability."⁵⁸⁸
- 16 f. Zuckerberg (8/21/2018): "One of the most important responsibilities we have as a
17 company is to keep people safe and stop anyone from abusing our service."⁵⁸⁹

18
19 ⁵⁸⁵ *Transcript of Zuckerberg's appearance before House committee*, Wash. Post (Apr. 11, 2018),
20 [https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-](https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on)
21 [appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on](https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on)
22 [<https://perma.cc/SA9L-QK4C>].

23 ⁵⁸⁶ *Facebook, Social Media Privacy, and the Use and Abuse of Data: Hearing Before the S. Comm.*
24 *on the Judiciary & S. Comm. on Com., Sci., & Transp.*, 115th Cong. (Apr. 10, 2018),
25 [https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-](https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data)
26 [of-data](https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data).

27 ⁵⁸⁷ Kara Swisher, *Zuckerberg: The Recode Interview*, Vox (Oct. 8, 2018),
28 [https://www.vox.com/2018/7/18/17575156/mark-zuckerberg-interview-facebook-recode-kara-](https://www.vox.com/2018/7/18/17575156/mark-zuckerberg-interview-facebook-recode-kara-swisher)
swisher.

⁵⁸⁸ *Q2 2018 Earnings: Transcript* at 2, Meta Inv. Rels. (July 25, 2018),
https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q2/Q218-earnings-call-transcript.pdf.

⁵⁸⁹ Mark Zuckerberg, Facebook (Aug. 21, 2018),
https://www.facebook.com/zuck/posts/10105188590724391?__tn__=K-R [<https://perma.cc/RUV3->
(footnote continued)]

- 1 g. Zuckerberg (9/7/2018): “What I’ve learned so far is that when you build services that
 2 are used by billions of people across countries and cultures, you will see all of the
 3 good humanity is capable of, and people will try to abuse those services in every way
 4 possible. It is our responsibility to amplify the good and mitigate the bad.”⁵⁹⁰
- 5 h. Zuckerberg (11/15/2018): “[W]e have a responsibility to keep people safe on our
 6 services.”⁵⁹¹
- 7 i. Zuckerberg (1/1/2019): “We ended 2018 with more than 30,000 people working on
 8 safety and security -- up from 10,000 people a couple of years ago.”⁵⁹²
- 9 j. Zuckerberg (1/30/2019): “[O]n all the content and safety and security issues, there’s
 10 more to do here but I’m proud of the work that we have done to get in front of a lot
 11 more of these issues.”⁵⁹³
- 12 k. Zuckerberg (3/30/2019): “[W]e have a responsibility to keep people safe on our
 13 services.”⁵⁹⁴
- 14 l. Zuckerberg (4/24/2019): “You should expect we’ll do everything we can to keep you
 15

16 _____
 17 5AJB].

18 ⁵⁹⁰ Mark Zuckerberg, Facebook (Sept. 7, 2018),
 19 https://www.facebook.com/zuck/posts/10105224999156601?__xts__%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSIP9yEUyjvaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkrzJ_dTLszwUZ3H6b3Q4biIc&__tn [https://perma.cc/L5C4-XUYY].

21 ⁵⁹¹ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement* at 1, Facebook,
 22 <https://www.facebook.com/notes/751449002072082/> [https://perma.cc/LS86-A943] (last edited May 5, 2021).

23 ⁵⁹² *Q4 2018 Earnings: Earnings Call Transcript* at 2, Meta Inv. Rel. (Jan. 30, 2019),
 24 https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q4/Q4-2018-earnings-call-transcript.pdf.

25 ⁵⁹³ *Id.* at 26.

26 ⁵⁹⁴ Mark Zuckerberg, *Mark Zuckerberg: The Internet needs new rules. Let’s start in these four areas*,
 27 Wash. Post (Mar. 30, 2019), https://www.washingtonpost.com/opinions/mark-zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-11e9-a3f7-78b7525a8d5f_story.html?noredirect=on [https://perma.cc/AF8J-AM5E].

1 safe on our services, within the bounds of an encrypted service.”⁵⁹⁵

2 m. Sheryl Sandberg, COO, Meta (1/29/2020): “[We] have to keep people safe and give
3 them control over their experience on our apps. And we are.”⁵⁹⁶

4 n. Sheryl Sandberg (10/29/2020): “While we continue to invest in helping businesses,
5 we are equally focused on keeping our platform safe.”⁵⁹⁷

6 o. Meta (12/23/2020), when asked by the Senate Committee on the Judiciary whether it
7 could “determine whether increased use of its platform among teenage girls has any
8 correlation with increased signs of depression [or anxiety][,]” responded: “No.”⁵⁹⁸
9 And, when asked what research Meta had conducted internally on the mental health
10 impacts of social media use, Meta responded: “[t]he effects of social media are still
11 being studied.”⁵⁹⁹

12 p. Zuckerberg (3/25/21), when asked by members of the U.S. House of Representatives
13 Committee on Energy and Commerce, “Do you believe that your platform harms
14 children?”: “I don’t believe so. This is something that we study and we care a lot
15 about; designing products that [improves] peoples’ well-being is very important to us.
16 And what our products do is help people stay connected to people they care about,
17 which I think is one of the most fundamental and important human things that we do,
18

19 _____
20 ⁵⁹⁵ Mark Zuckerberg, Facebook (Apr. 24, 2019),
<https://www.facebook.com/zuck/posts/10107243286682221> [<https://perma.cc/YVG5-GMQJ>].

21 ⁵⁹⁶ *Q4 2019 Earnings: Earnings Call Transcript* at 5, Meta Inv. Rels. (Jan. 29, 2020),
22 [https://s21.q4cdn.com/399680738/files/doc_financials/2019/q4/Q4'19-FB-Earnings-Call-
Transcript.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/2019/q4/Q4'19-FB-Earnings-Call-Transcript.pdf).

23 ⁵⁹⁷ *Q3 2020 Earnings: Earnings Call Transcript* at 6, Meta Inv. Rels. (Oct. 29, 2020),
24 [https://s21.q4cdn.com/399680738/files/doc_financials/2020/q3/FB-Q3-2020-Earnings-Call-
Transcript.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/2020/q3/FB-Q3-2020-Earnings-Call-Transcript.pdf).

25 ⁵⁹⁸ *Breaking the News: Censorship, Suppression, and the 2020 Election: Facebook, Inc. Responses*
26 *to Questions for the Record from the Comm. on the Judiciary’s November 17, 2020 Hearing*, 116th
27 Cong. 124 (2020),
<https://www.judiciary.senate.gov/imo/media/doc/Zuckerberg%20Responses%20to%20QFRs.pdf>.

28 ⁵⁹⁹ *Id.* at 50–51.

1 whether that is for teens or for people who are older than that.”⁶⁰⁰

2 q. David Wehner, CFO, Meta (4/28/2021): “I mean, the only thing I’d add . . . is that, I
3 think more than anyone else in the industry, we invest on the safety and security side
4 to sort of keep bad content off the site before it gets ranked and put into what people
5 see. So we’ve got 35,000 -- over 35,000 people on the safety and security side. We’ve
6 got the most robust set of content policies out there. We do a quarterly call, public
7 call around our content review process and procedures. So I think that on the front,
8 before it even gets into the algorithm, I think we really do more than anyone else in
9 the industry on the safety and security front to prevent things like misinformation and
10 a bad content going into the system in the first place.”⁶⁰¹

11 r. Adam Mosseri (5/2021), in a statement to reporters, dismissing concerns around
12 Instagram’s negative impact on teens as “quite small.”⁶⁰²

13 425. On each of the above occasions, and many others, Meta falsely touted the safety of
14 its platforms; it could have but failed to disclose information it knew concerning the significant
15 risks associated with its platforms, even though it knew that the public lacked access to this
16 information. For instance, in a December 2019 memo, Meta’s Chief Technology Officer remarked
17 that the media has “limited information to work with” about the company and that this limitation
18 is by Meta’s “own design.”⁶⁰³

19
20 ⁶⁰⁰ *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation: Hearing Before the H. Subcomm. on Commc’ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm. on Energy & Com., 117th Cong. 175:4166–4175 (2021),*
21 <https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf>.

22
23 ⁶⁰¹ *Q1 2021 Earnings: Earnings Call Transcript* at 14, Meta Inv. Rels. (Apr. 28, 2021),
24 https://s21.q4cdn.com/399680738/files/doc_financials/2021/Q1/FB-Q1-2021-Earnings-Call-Transcript.pdf.

25 ⁶⁰² Taylor Hatmaker, *Facebook Knows Instagram Harms Teens. Now its Plan to Open the App to Kids Looks Worse than Ever*, TechCrunch (Sept. 16, 2021),
26 <https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/>.

27 ⁶⁰³ Haugen_00007350 at Haugen_00007350 (December 30, 2019 memo by Andrew Bosworth:
28 *Thoughts for 2020*).

1 426. In 2018, Sandberg’s talking points prepared for conversations with reporters
2 included the statement that Meta “do[es] not optimize [its] systems to increase amount of time
3 spent in News Feed” and “explicitly do[es]n’t give [its] teams goals around time spent.”⁶⁰⁴

4 427. During a November 2020 Congressional hearing, Mark Zuckerberg was asked
5 whether he believed Meta’s platforms can be addictive. In response, Zuckerberg stated, “we
6 certainly do not design the product in that way.”⁶⁰⁵

7 428. Then in his March 2021 testimony before Congress, Zuckerberg was asked whether
8 he agreed that Meta makes money off creating an addiction to its platforms. Again, Zuckerberg
9 responded, “No. I don’t agree with that.”⁶⁰⁶

10 429. Further, Zuckerberg’s talking points included the following statement: “The impact
11 that our products have on the well-being of everyone is a top priority. It’s not how much time you
12 spend online, it’s how you spend it.”⁶⁰⁷ Zuckerberg denied that Meta designed its platforms to be
13 addictive to maximize time spent.⁶⁰⁸

14 430. Similarly, Zuckerberg told Congress on March 25, 2021, that “it is a common
15 misconception that our teams—our goals, or even have goals, of trying to increase the amount of
16 time that people spent” and that “I don’t give our News Feed team or our Instagram team goals
17
18

19 ⁶⁰⁴ MDL AG Compl. at 25, ¶ 135.

20 ⁶⁰⁵ *Breaking the News: Censorship, Suppression, and the 2020 Election: Hearing Before the S.*
21 *Comm. on the Judiciary*, 116th Cong. (2020), [https://www.judiciary.senate.gov/committee-](https://www.judiciary.senate.gov/committee-activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election)
22 [activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election](https://www.judiciary.senate.gov/committee-activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election) (testimony of
23 Mark Zuckerberg); *see also Facebook CEO Mark Zuckerberg on whether products are addictive: ‘We Certainly Do Not Design the Product in that Way’*, Recount (Nov. 17, 2020),
<https://therecount.com/watch/facebook-ceo-mark-zuckerberg-on/2645864077>.

24 ⁶⁰⁶ *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation:*
25 *Hearing Before the H. Subcomm. on Comm’n’s & Tech., J. with Subcomm. on Consumer Prot. &*
26 *Com., Comm. on Energy & Com.*, 117th Cong. 107:2491–2497 (2021),
[https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-](https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf)
26 [20210325.pdf](https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf) (testimony of Mark Zuckerberg).

27 ⁶⁰⁷ MDL AG Compl. at 25–26, ¶ 136.

28 ⁶⁰⁸ *Id.*

1 around increasing the amount of time that people spend.”⁶⁰⁹

2 431. In September 2021, Meta’s Global Head of Safety Antigone Davis told Congress, “I
3 disagree with calling our product addictive [T]hat’s not how we build products.”⁶¹⁰

4 432. In December 2021, Head of Instagram Adam Mosseri told Congress, “I don’t believe
5 that research suggests that our products are addictive.”⁶¹¹

6 433. Meta’s pattern of intentional concealment came to a head in August 2021, just weeks
7 before Frances Haugen dropped her bombshell revelations on the public. On August 4, 2021,
8 Senators Marsha Blackburn and Richard Blumenthal wrote to Mark Zuckerberg. The Senators’
9 letter observed that “[a]n expanding volume of scientific research shows that social media
10 platforms can have a profoundly harmful impact on young audiences” and noted “grave concerns
11 about [Meta’s] apparent effort to ensnare children into social media platforms at earlier and earlier
12 ages.”⁶¹² The letter concluded by asking Zuckerberg six “pretty straightforward questions about
13 how the company works and safeguards children and teens on Instagram.”⁶¹³

14 434. In its August 17, 2021 written response to Senators Blackburn and Blumenthal, Meta
15 omitted any reference to the internal research it had conducted demonstrating the negative impact

16 ⁶⁰⁹ MDL AG Compl. at 26, ¶ 137.

17 ⁶¹⁰ See *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
18 <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

19 ⁶¹¹ Taylor Hatmaker, *Instagram’s Adam Mosseri defends the app’s teen safety track record to Congress*, TechCrunch (Dec. 8, 2021), <https://techcrunch.com/2021/12/08/instagrams-adam-mosseri-senate-hearing-teen-safety/>.

20 ⁶¹² Letter from Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator, to Mark
21 Zuckerberg, CEO, Facebook, Inc. at 1 (Aug. 4, 2021),
22 <https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf>.

23 ⁶¹³ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
24 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>; see also Letter from Richard Blumenthal, U.S. Senator, and
25 Marsha Blackburn, U.S. Senator, to Mark Zuckerberg, CEO, Facebook, Inc. at 2–3 (Aug. 4, 2021),
26 <https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf>.

1 Instagram can have on kids’ mental health.⁶¹⁴

2 435. The Senators’ letter asked whether Meta had ever developed products or features
3 “that it had reason to believe could have a negative effect on children’s and teens’ mental health or
4 well-being[.]”⁶¹⁵ Meta responded by claiming it had “built many special protections for teens.”⁶¹⁶
5 But it failed to mention, for example, that it employed “growth hackers” who internally advised
6 that “we can be very aggressive with our notifications to create a habit[.]”⁶¹⁷

7 436. The Senators’ letter also asked if Meta’s research had “ever found that its platforms
8 and products can have a negative effect on children’s and teens’ mental health or well-being[.]”⁶¹⁸
9 Meta responded that the matter was “still being studied,”⁶¹⁹ that it was challenging to conduct
10 such research,⁶²⁰ and that the company was “not aware of a consensus among studies or experts
11 about how much screen time is ‘too much.’”⁶²¹ While Meta reiterated its vague and already public
12 position that “passive” use of social media can correlate with “negative outcomes,”⁶²² it failed to
13 disclose any more specific findings.⁶²³

14 437. Meta failed to disclose, in response to the Senators’ direct question, its detailed

15 ⁶¹⁴ Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.
16 Senator (Aug. 17, 2021),
17 <https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

18 ⁶¹⁵ *Id.* at 4.

19 ⁶¹⁶ *Id.*

20 ⁶¹⁷ Haugen_00016893 at Haugen_00016914 (quoting August 3, 2017 memo: *Have we made people
addicted to Facebook?*).

21 ⁶¹⁸ Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.
22 Senator at 2 (Aug. 17, 2021),
<https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

23 ⁶¹⁹ *Id.*

24 ⁶²⁰ *Id.* at 3.

25 ⁶²¹ *Id.*

26 ⁶²² *Id.*; see also *Q1 2018 Earnings: Transcript* at 2, Meta Inv. Rels. (Apr. 25, 2018),
https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q1/Q1-18-Earnings-call-transcript.pdf.

27 ⁶²³ Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.
28 Senator at 6 (Aug. 17, 2021),
<https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

1 research regarding addiction to its platforms, which the company terms problematic usage;⁶²⁴ its
2 assessment that “[t]he best external research indicates that Facebook’s impact on people’s well-
3 being is negative”;⁶²⁵ its identification of “Problematic Use,” loneliness, and social comparison as
4 the three drivers of this negative impact;⁶²⁶ its finding that up to 25% of people on Facebook
5 experience so-called problematic use;⁶²⁷ its data showing that “high time spent users do tend to be
6 disproportionately younger users”;⁶²⁸ its conclusion that so-called problematic use causes
7 profound harms, including loss of productivity, sleep disruption, relationship impacts, and safety
8 risks;⁶²⁹ its identification of multiple Meta product features that act as triggers for so-called
9 problematic use;⁶³⁰ its knowledge that teens who feel addicted to a Meta app “know that what
10 they’re seeing is bad for their mental health but feel unable to stop themselves”;⁶³¹ its studies
11 regarding body image and social comparison;⁶³² its knowledge that Instagram makes body image

12
13 ⁶²⁴ Haugen_00016373 at Haugen_00016379 (March 9, 2020 internal presentation and discussion
14 about problematic use with a slide stating that problematic use “is sometimes referred to as ‘social
15 media addiction’ externally”); *Id.* at Haugen_00016373 (March 9, 2020 internal presentation and
16 discussion regarding problematic use in which a Meta employee shared a post stating, “[i]n Q4 2019,
17 our Well-being Product Team conducted global qualitative research to better understand
18 ‘problematic’ use (sometimes called ‘social media addiction’ externally”); Haugen_00005458 at
19 Haugen_00005473 (November 5, 2019 Meta employee report: *Hard Life Moments – Mental health
20 deep dive*); Haugen_00007055 at Haugen_00007055 (May 6, 2019 Meta employee memo:
21 *Problematic use / time-spent papers at CHI*).

22 ⁶²⁵ Haugen_00016373 at Haugen_00016381 (March 9, 2020 internal presentation and discussion
23 about problematic use).

24 ⁶²⁶ *Id.*

25 ⁶²⁷ Haugen_00016373 at Haugen_00016383.

26 ⁶²⁸ Haugen_00017177 at Haugen_00017181 (quoting October 30, 2018 Meta employee report: *How
27 does Instagram usage change depending on overall time spent?*); Haugen_00005458 at
28 Haugen_00005750–Haugen_00005751 (2020 presentation containing slides about brain maturation).

⁶²⁹ Haugen_00016373 at Haugen_00016414 (March 9, 2020 presentation: *All problematic users
were experiencing multiple life impacts*).

⁶³⁰ *Id.* at Haugen_00016410 (“We heard about 10+ triggers contributing to PU habits.”).

⁶³¹ Haugen_00017069 at Haugen_00017171 (October 10, 2019 report by Meta employees and
discussion about teens’ mental health).

⁶³² Haugen_00005458 at Haugen_00005484 (presentation: *Mental Health Findings*);
Haugen_00000797 at Haugen_00000797 (November 16, 2018 report: *[Instagram] Social
Comparison Research Findings*).

1 issues worse “for one in three teen girls”;⁶³³ its analysis showing that topics eliciting appearance
2 comparison comprise one third of what teen girls see on Instagram;⁶³⁴ its research concluding that
3 negative social comparison on Instagram gets worse for users over time;⁶³⁵ its awareness that
4 teens report Instagram as a source of increased anxiety and depression;⁶³⁶ its researchers’
5 conclusion that teens “[h]ave an addict’s narrative about their use” of Instagram;⁶³⁷ and its survey
6 finding that “[o]ver one third of teens felt they have only a little control of no control at all over
7 how Instagram makes them feel”⁶³⁸—in addition to the other findings described in this Complaint.

8 438. Meta’s years-long concealment of its research was revealed just weeks later, when
9 Frances Haugen released these studies, along with a trove of other internal Meta documents, to
10 *The Wall Street Journal*. Even these disclosures did not reveal the full scope and extent of Meta’s
11 misrepresentations, discussed elsewhere in this Complaint.

12 439. On September 21, 2021, Senator Blumenthal confronted a Meta representative about
13 the conspicuous omissions in Meta’s response to his letter:

14 Last month, on August 4, Senator Blackburn and I wrote to Mark Zuckerberg and
15 asked him specifically about this issue. We asked, and I’m quoting, “Has Facebook’s
16 research ever found that its platforms and products can have a negative effect on
17 children’s and teens’ mental health or well-being such as increased suicidal thoughts,
18 heightened anxiety, unhealthy usage patterns, negative self-image, or other
19 indications of lower well-being?”

20 ⁶³³ Haugen_00005458 at Haugen_00005500 (November 5, 2019 presentation containing a slide: *But, We Make Body Image Issues Worse for 1 in 3 Teen Girls*).

21 ⁶³⁴ Haugen_00002527 at Haugen_00002527 (March 9, 2021 report: *How the topics people see are linked to appearance comparison on [Instagram]*).

22 ⁶³⁵ Haugen_00000797 at Haugen_00000875 (November 16, 2018 report containing a page displaying data about negative social comparison over time).

23 ⁶³⁶ Haugen_00017069 at Haugen_00017121 (October 10, 2019 presentation containing a slide: *Teens blame Instagram for increases in the rates of anxiety and depression among teens*).

24 ⁶³⁷ *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021)*, <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

25 ⁶³⁸ *Id.*

1 It wasn't a trick question. It preceded the reports in the Journal. We had no idea about
2 the whistleblower documents that were ultimately revealed.

3 Facebook dodged the question. "We are not aware of a consensus among studies or
4 experts about how much screen time is too much."

5 We are not aware.

6 Well, we all know now that representation was simply untrue.⁶³⁹

7 440. Senator Blumenthal went on to ask the witness, Steve Satterfield, Facebook's Vice
8 President of Privacy & Public Policy, "why did Facebook misrepresent its research on mental
9 health and teens when it responded to me and Senator Blackburn?" After disputing the
10 characterization, Satterfield responded, "The safety and well-being of the teens on our platform is
11 a top priority for the company. We're going to continue to make it a priority. This was important
12 research." Senator Blumenthal then went on: "Why did you conceal it?" Satterfield responded,
13 "we didn't make it public because we don't, with a lot of the research we do because we think that
14 is an important way of encouraging free and frank discussion within the company about hard
15 issues."⁶⁴⁰

16 441. Meta unilaterally decided to prioritize "free and frank" internal discussion over
17 honest and transparent responses to direct questions from sitting United States Senators. When it
18 "dodged, ducked, sidetracked, [and] in effect misled" Senators Blumenthal and Blackburn, Meta
19 also deceived the public.⁶⁴¹

20 442. Moreover, Satterfield's "free and frank discussion" excuse has been contradicted

21 ⁶³⁹ Press Release, Richard Blumenthal, U.S. Senator, *Blumenthal Demands Facebook Appear at*
22 *Next Week's Consumer Protection Subcomm. Hearing to Explain Coverup of its Platforms' Negative*
23 *Impact on Teens and Children* (Sept. 21, 2021),
<https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-demands-facebook-appear-at-next-weeks-consumer-protection-subcommittee-hearing-to-explain-coverup-of-its-platforms-negative-impact-on-teens-and-children>.

24 ⁶⁴⁰ *Id.*

25 ⁶⁴¹ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
26 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong.* (2021),
27 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>; *id.* (Senator Brian Schatz to Frances Haugen that he had "a
28 long list of misstatements, misdirections and outright lies from the company").

1 both internally and publicly by Meta employees. On January 8, 2020, a Meta software engineer
2 participated in an internal “ask me anything” session on the last day of his four-year tenure at the
3 company. When asked how the Meta Defendants should respond to outside pressures and
4 critiques, the software engineer stated, “[r]ight now, many employees feel that if they
5 whistleblow, dissent, give feedback to unethical decisions, etc, then they are at risk for being
6 fired. We can fix that by giving people the safety to speak up when they see something wrong
7 going on.”⁶⁴²

8 443. Frances Haugen echoed this sentiment in her testimony before the Senate, citing
9 evidence that Meta “is so scared of even basic transparency that it goes out of its way to block
10 researchers who are asking awkward questions.”⁶⁴³ Ms. Haugen further testified that Meta’s
11 culture emphasizes insularity and promotes the idea that “if information is shared with the public,
12 it will just be misunderstood.”⁶⁴⁴

13 444. The above representations of former employees are consistent with reports from
14 Facebook content moderators that there is a “culture of fear and excessive secrecy” within Meta
15 that “prevent[s] [them] from speaking out[.]”⁶⁴⁵

16 445. Notably, Meta’s pattern of concealment did not end after Frances Haugen came
17 forward. On September 30, 2021, Antigone Davis, Facebook’s Head of Safety, testified before the
18 Senate. Ms. Davis represented that, when Instagram “do[es] ads to young people, there are only
19 three things that an advertiser can target around: age, gender, location. We also prohibit certain
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22 ⁶⁴² Haugen_00007481 at Haugen_00007492 (January 8, 2020 report: *Political Ads Announcement*
Preview [Confidential]).

23 ⁶⁴³ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
24 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021)*,
25 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

26 ⁶⁴⁴ *Id.*

27 ⁶⁴⁵ Zoe Schiffer, *Facebook content moderators call for company to put an end to overly restrictive*
28 *NDAAs*, *Verge* (July 22, 2021), <https://www.theverge.com/2021/7/22/22587757/facebook-content-moderators-ireland-end-restrictive-ndas>.

1 ads to young people, including weight-loss ads.”⁶⁴⁶ She further testified, “We don’t allow the
2 sexualization of minors on our platform.”⁶⁴⁷ A study by the Technology Transparency Project
3 proved this was false.⁶⁴⁸

4 446. In addition to the litany of misrepresentations and omissions identified above, Meta
5 has repeatedly failed to tell the truth about the age of users on Instagram. In statements to
6 Congress and elsewhere, Zuckerberg has represented that Meta does not allow users under the age
7 of 13 to use the product. For example, in testimony before the U.S. House of Representatives
8 Committee on Energy and Commerce, Zuckerberg stated that “[t]here is clearly a large number of
9 people under the age of 13 who would want to use a service like Instagram. We currently do not
10 allow them to do that.”⁶⁴⁹

11 447. However, as shown above, Meta has long known that its products are widely used by
12 children under the age of 13. In fact, Meta knows through retrospective cohort analyses that “up to

13 ⁶⁴⁶ *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing*
14 *Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
15 <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

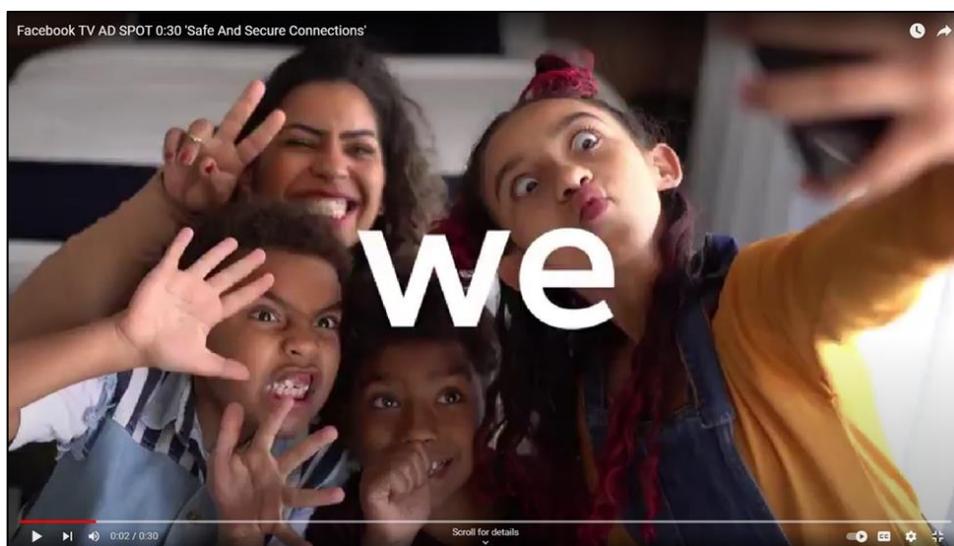
16 ⁶⁴⁷ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
17 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
18 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

19 ⁶⁴⁸ *See id.*

20 ⁶⁴⁹ *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation:*
21 *Hearing Before the H. Subcomm. on Commc’ns & Tech., J. with Subcomm. on Consumer Prot. &*
22 *Com., Comm. on Energy & Com.*, 117th Cong. 59:1316–1320 (2021),
23 <https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf>; *see also id.* at 175:4168–4178 (Zuckerberg: “[O]ur policies on the main apps that we
24 offer generally prohibit people under the age of 13 from using the services.”); *see also Transcript of*
25 *Zuckerberg’s appearance before House committee*, Wash. Post (Apr. 11, 2018),
26 https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on
27 [<https://perma.cc/SA9L-QK4C>] (When asked if it is correct that children can get a Facebook account
28 starting at age 13, Zuckerberg confirmed that it was correct); *see also* NewSchools Venture Fund,
NewSchools Summit 2011: John Doerr and Mark Zuckerberg on innovation and education,
YouTube (May 24, 2011), <https://www.youtube.com/watch?v=n03zAOadyMA> (Zuckerberg: “[A]nd
so basically, we don’t allow people under the age of 13 on Facebook . . . today we don’t allow
people under the age of 13 to sign up.”).

1 10 to 15% of even 10-year-olds in a given cohort may be on Facebook or Instagram.”⁶⁵⁰ Meta is
2 also aware that teenagers coach tweens, defined by them as 10- to 12-year-olds, on how to use its
3 platforms.⁶⁵¹

4 448. Indeed, far from acknowledging the serious problems with its platforms and warning
5 children and parents of the same, Meta has launched advertising campaigns designed to encourage
6 more children to use its platforms—by touting the purported safety of those platforms. For
7 example, in a recent television ad, Meta claimed that it “build[s] technology that gives you more
8 control and helps keep you safe[,]” including through its “industry leading AI” and other “tools
9 that can protect—so you can connect.” This advertisement featured children, as in the screenshot
10 below.



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21 Other advertising campaigns have similarly touted Meta’s AI as being a feature that contributes to its
22 platforms’ safety—without disclosing the serious problems identified in this Complaint.

23 449. In another example of advertising that promotes use by children, a Meta 2021 online
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25 ⁶⁵⁰ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the*
26 *Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021),*
27 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

28 ⁶⁵¹ Haugen_00016728 at Haugen_00016737–Haugen_00016740.

1 advertisement actively highlighted the posts available for fifth grade children on its Facebook
2 product, highlighting the experience of an art teacher who used Facebook to communicate with
3 students during the pandemic—an experience the video noted was “a lot to unpack for little, tiny
4 people.”

5 450. And Meta only continues to hide the harms its platforms cause. On November 7,
6 2023, a second Meta whistleblower, Arturo Bejar, testified before a Senate subcommittee about the
7 ways in which Meta has failed to act to protect its teenage users.⁶⁵² Bejar, a former Facebook
8 engineering director and Instagram consultant, testified that “Meta leadership was aware of
9 prevalent harms to its youngest users but declined to take adequate action” in response.⁶⁵³

10 451. Bejar testified that he informed Chief Product Officer Chris Cox of research into
11 platform harms to teens and that Cox acknowledged he was already aware of the statistics. Bejar
12 found this response “heartbreaking because it meant that they knew and they were not acting on
13 it[.]”⁶⁵⁴

14 452. Similarly, Bejar turned over emails that showed he raised similar concerns to top
15 Meta leaders. In an email to Mark Zuckerberg, then-Meta COO Sheryl Sandberg, and Instagram
16 CEO Adam Mosseri dated October 5, 2021, Bejar noted that “51% of Instagram users say ‘yes’
17 to having had a bad or harmful experience in the last 7 days.”⁶⁵⁵ Bejar also flagged to Zuckerberg
18 that one survey showed almost 40% of 13- to 15-year-olds said “they experienced negative
19 comparison” while on Instagram.⁶⁵⁶

20 453. Less than two weeks later, on October 14, 2021, Bejar raised similar concerns to
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22 ⁶⁵² Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies*, CNBC (Nov. 7,
23 2023), <https://www.cnbc.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html>.

24 ⁶⁵³ *Id.*

25 ⁶⁵⁴ *Id.*

26 ⁶⁵⁵ *Internal Instagram and Facebook Documents* at 109, Richard Blumenthal U.S. Senator,
27 <https://www.blumenthal.senate.gov/imo/media/doc/1172023bejardocuments.pdf> (Bejar
whistleblower documents).

28 ⁶⁵⁶ *Id.*

1 Adam Mosseri.⁶⁵⁷ Bejar testified that he never received a response from or met with Zuckerberg or
2 Sandberg.⁶⁵⁸ He further testified that he thought Meta would “take [his] concerns and
3 recommendations seriously. Yet years have gone by and millions of teens are having their mental
4 health compromised and are still being traumatized.”⁶⁵⁹

5 454. Bejar drew three conclusions in his Senate testimony. “One, Meta knows the harm
6 that kids experience on their platform. And executives know that their measures fail to address it.
7 Two, there are actionable steps that Meta could take to address the problem. And three, they are
8 deciding time and time again to not tackle these issues.”⁶⁶⁰

9 **5. Meta failed to adequately warn NYC Plaintiffs or the public about the dangers**
10 **and harms caused by Instagram and Facebook, or provide instructions**
11 **regarding safe use.**

12 455. Meta has failed to adequately warn the public, including NYC Plaintiffs and
13 members of NYC Plaintiffs’ community, about the physical and mental health risks posed by
14 Instagram and Facebook. These risks include a plethora of mental health disorders, like
15 compulsive use, addiction, eating disorders, anxiety, depression, insomnia, exacerbated executive
16 dysfunction, suicidal ideation, self-harm, and death.

17 456. Meta targets adolescent users via advertising and marketing materials distributed
18 throughout digital and traditional media that fail to provide sufficient warnings to potential
19 adolescent consumers or their parents, teachers, or caregivers, of the physical and mental risks

20 ⁶⁵⁷ *Id.* at 112–113.

21 ⁶⁵⁸ Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies*, CNBC (Nov. 7,
22 2023), [https://www.cnn.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-](https://www.cnn.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html)
23 [testifies.html](https://www.cnn.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html).

24 ⁶⁵⁹ Justin Hendrix, *Transcript: Senate Hearing on Social Media and Teen Mental Health with*
25 *Former Facebook Engineer Arturo Bejar*, Tech Pol’y Press (Nov. 8, 2023),
26 [https://www.techpolicy.press/transcript-senate-hearing-on-social-media-and-teen-mental-health-](https://www.techpolicy.press/transcript-senate-hearing-on-social-media-and-teen-mental-health-with-former-facebook-engineer-arturo-bejar/)
27 [with-former-facebook-engineer-arturo-bejar/](https://www.techpolicy.press/transcript-senate-hearing-on-social-media-and-teen-mental-health-with-former-facebook-engineer-arturo-bejar/).

28 ⁶⁶⁰ *Former Meta Executive Testifies on Social Media and Youth Mental Health* at 27:30-27:57, C-
SPAN (Nov. 7, 2023), [https://www.c-span.org/video/?531650-1/meta-executive-testifies-social-](https://www.c-span.org/video/?531650-1/meta-executive-testifies-social-media-youth-mental-health)
media-youth-mental-health; Protecting Kids Online: Testimony from a Facebook Whistleblower:
Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021),
<https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

1 associated with using Facebook and Instagram.

2 457. Meta also fails to adequately warn the public, adolescent users, or their parents
3 during the product registration process. At account setup, neither Instagram nor Facebook contain
4 warning labels, banners, or conspicuous messaging to adequately inform adolescent users or their
5 parents of the known product risks and potential physical and mental harms associated with usage.
6 Instead, Meta allows adolescent users, including those under the age of 13, to easily create an
7 account (or multiple accounts) and fully access these platforms.

8 458. Meta’s failure to warn continues even as adolescents exhibit problematic signs of
9 addiction to and compulsive use of Facebook or Instagram. For example, Meta does not warn
10 users when their screen time reaches harmful levels or when adolescents are accessing the product
11 habitually.

12 459. Despite proactively providing adolescent users with countless filtering and editing
13 tools, Meta also does not appropriately warn adolescent users regarding which images have been
14 altered or the mental health harms associated with the heavily filtered images that Meta presents
15 and recommends.

16 460. Not only does Meta fail to adequately warn users regarding the risks associated with
17 Instagram and Facebook, it also does not provide sufficient instructions on how adolescents can
18 safely use the platforms.

19 461. As recently as January 2024, Meta claims to have implemented new measures to
20 “support teens” so they can have “age-appropriate experiences” on Meta’s platforms.⁶⁶¹ These
21 new measures include (1) “hiding more types of age-inappropriate content”; (2) “hiding more
22 results in Instagram Search related to suicide, self-harm and eating disorders”; (3) “prompting
23 teens to update their privacy settings on Instagram”; and (4) launching “nighttime nudges that
24 show up when teens have spent more than 10 minutes on a particular Instagram surface.”⁶⁶²

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26 ⁶⁶¹ *Introducing Stricter Message Settings for Teens on Instagram and Facebook*, Meta (January 25,
27 2024), [https://about.fb.com/news/2024/01/introducing-stricter-message-settings-for-teens-on-
instagram-and-facebook/](https://about.fb.com/news/2024/01/introducing-stricter-message-settings-for-teens-on-instagram-and-facebook/).

28 ⁶⁶² *Our tools, features and resources to help support teens and parents*, Meta,
(footnote continued)

1 462. Tools implemented in 2024 will not remedy prior harms suffered or damages
2 incurred by NYC Plaintiffs. Moreover, the efficacy of Meta’s recently implemented tools is
3 questionable. As whistleblower Arturo Bejar has previously told Congress, Meta directs resources
4 toward tackling “a very narrow definition of harm.”⁶⁶³ Meta has previously touted its success in
5 making its platform safer for users, but the reality was much different: “Narrow rules and
6 unreliable automated enforcement systems left a left a lot of room” for harm on the platform, “but
7 they made the company’s child-safety statistics look pretty good” in Meta’s internal
8 measurements.⁶⁶⁴ ““There’s a grading-your own-homework problem,”” said Zvika Krieger, a
9 former director of responsible innovation at Meta who worked with the Well-Being Team.”⁶⁶⁵
10 Further, Meta’s recently implemented tools also do not include changes to Facebook or
11 Instagram’s use of algorithms or other intermittent variable rewards that manipulate young users
12 to spend as much time on Facebook and Instagram as possible. Providing optional tools to young
13 users who are addicted to or dependent on the platform, and relying on their own self-control to
14 address the problems Meta’s design features have caused, will not solve the problem.

15 463. Meta’s failure to properly warn and instruct adolescent users or their parents has
16 proximately caused significant harm to NYC Plaintiffs, who have expended and continue to
17 expend significant resources addressing the impact of Meta’s conduct on NYC Plaintiffs’
18 operations, including providing additional support to impacted youth.

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22 <https://www.meta.com/help/policies/safety/tools-support-teens-parents/> (last visited Feb. 10, 2024).

23 ⁶⁶³ Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies*, CNBC (Nov. 7,
24 2023), <https://www.cnbc.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html>.

25 ⁶⁶⁴ Jeff Horwitz, *His Job Was to Make Instagram Safe for Teens. His 14-Year-Old Showed Him*
26 *What the App Was Really Like*, Wall Street Journal (Nov. 2, 2023),
<https://www.wsj.com/tech/instagram-facebook-teens-harassment-safety-5d991be1>.

27 ⁶⁶⁵ Jeff Horwitz, *His Job Was to Make Instagram Safe for Teens. His 14-Year-Old Showed Him*
28 *What the App Was Really Like*, Wall Street Journal (Nov. 2, 2023),
<https://www.wsj.com/tech/instagram-facebook-teens-harassment-safety-5d991be1>.

1 **C. FACTUAL ALLEGATIONS AS TO SNAP**

2 **1. Background and overview of Snapchat.**

3 464. Snap owns and operates the Snapchat social media product, an application that is
4 widely marketed by Snap and available to users throughout the United States. Snapchat is a
5 platform for engaging in text, picture, and video communication. The app also contains a
6 discovery page and an endless, algorithmically run feed of short videos. The primary objective of
7 the platform is to maximize the frequency and length of each user’s viewing sessions. Fifty-nine
8 percent of teenagers in the U.S. actively use Snapchat.⁶⁶⁶ Twenty-two percent of parents in the
9 U.S. know their child between the ages of 9 and 11 uses Snapchat.⁶⁶⁷

10 465. Snapchat was founded in 2011, by three Stanford college students, Reggie Brown,
11 Evan Spiegel, and Bobby Murphy. It began as a simple application designed to allow a user to
12 send a picture to a friend that would later disappear. Having gained only 127 users a few months
13 after its launch, Snapchat began to market to high school students. Within the following year,
14 Snapchat grew to more than 100,000 users.

15 466. Snapchat became well-known for its ephemeral nature, which, in effect, removes all
16 accountability what is sent on the platform. Specifically, Snapchat allows users to form groups
17 and share posts or “Snaps” that disappear after being viewed by the recipients. However, the
18 Snapchat social media product quickly evolved from there, as its leadership made design changes
19 and rapidly developed new product features that were intended to, and successfully did, increase
20 Snapchat’s popularity among minors.

21 467. In 2012, Snapchat added video capabilities to its product, pushing the number of
22 Snaps to 50 million per day. In 2013, Snapchat added “Stories” and “Chat” features; in 2014, live
23 video chat capabilities, text conversations, “Our Story,” Geofilters, and Snapcash; in 2015,
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25 ⁶⁶⁶ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
26 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

27 ⁶⁶⁷ Brooke Auxier *et al.*, *Children’s engagement with digital devices, screen time*, Pew Rsch. Ctr.
28 (July 28, 2020) <https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/>.

1 Discovery, QR code incorporation, and facial recognition software; and in 2016, Memories and
2 Snapchat Groups.

3 468. By 2015, advertisements were pervasive on Snapchat, and by 2018, 99% of
4 Snapchat's total revenue came from advertising. In 2022, Snap's revenue was approximately \$4.6
5 billion.⁶⁶⁸ Like Meta and Defendants in general, Snapchat decided to monetize its userbase, and
6 changed its product in ways that made it more harmful for users yet resulted in increased
7 engagement and profits for Snapchat. By 2015, Snapchat had over 75 million active users and was
8 the most popular social media application among American teenagers in terms of number of users
9 and time spent using the product.

10 469. To further expand its userbase, Snapchat incorporates several features, as set forth in
11 more detail below, that serve no purpose other than to create dependency on Snapchat's social
12 media product. These features, in turn, result in sleep deprivation, anxiety, depression, shame,
13 interpersonal conflicts, and other serious mental and physical harms. Snapchat knows, or should
14 know, that its product is harmful to adolescents, but, as with Defendants in general, it consistently
15 opts for increased profit at the expense of the well-being of its youth users. Defendants' platforms
16 are used by millions of children every day, children who have become addicted to these platforms
17 because of their design and product features, to the point that parents cannot remove all access to
18 the platforms without minor users adamantly protesting, often engaging in self-harm, threatening
19 hunger strikes and/or suicide, and other foreseeable consequences of withdrawal from these
20 platforms, where such cessation would require professional intervention.

21 470. Snap calls itself "a camera company."⁶⁶⁹ Its "flagship product, Snapchat, is a camera
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23 ⁶⁶⁸ *Snap Inc. Announces Fourth Quarter and Full Year 2022 Financial Results*, Snap Inc. (Jan. 31,
24 2023), <https://investor.snap.com/news/news-details/2023/Snap-Inc.-Announces-Fourth-Quarter-and-Full-Year-2022-Financial-Results/default.aspx>.

25 ⁶⁶⁹ Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017),
26 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>; *see also*
27 *Snap Inc. Announces New Augmented Reality Tools and Camera Experiences for Snapchatters,*
28 *Creators, and Businesses*, Snap Inc. (May 20, 2021), <https://investor.snap.com/news/news-details/2021/Snap-Inc.-Announces-New-Augmented-Reality-Tools-and-Camera-Experiences-for-Snapchatters-Creators-and-Businesses/default.aspx> ("We believe that reinventing the camera
(footnote continued)

1 application that was created to help people communicate through short videos and images. [Snap]
2 call[s] each of those short videos or images a Snap.”⁶⁷⁰ Snap’s design of its Snapchat product
3 capitalizes on children’s increasing attachment to quick, instantaneous exchanges. As Snap’s
4 founder and CEO Evan Spiegel has explained, “today. . . pictures are being used for talking. So
5 when you see your children taking a zillion photos of things that you would never take a picture
6 of, it’s cos [sic] they’re using photographs to talk. And that’s why people are taking and sending
7 so many pictures on Snapchat every day.”⁶⁷¹

8 471. Spiegel’s statement is telling, as Snap has tailored every aspect of its Snapchat
9 product to children rather than adults. Snap designed and implemented dangerous features in
10 Snapchat that exploit children’s need for social acceptance and rewards by pushing its users to
11 maximize their use of and engagement with the app. Snap built Snapchat using manipulative
12 techniques to compel young users to send an ever-increasing number of photographs and videos,
13 and to reward users who maximize their engagement with elevated status. Snap also dangerously
14 encourages adolescents to increase engagement on the app indiscriminately, pushing tools to share
15 sensitive material with an ever-expanding group of friends and strangers.

16 472. Snapchat’s design features cause its young users to suffer increased anxiety,
17 depression, disordered eating, sleep deprivation, suicide, and other severe mental and physical
18 injuries. Snap knows or should have known this. Snap intentionally designed Snapchat to prey on
19 the neuropsychology and behavioral patterns of children to maximize their engagement and
20 increase Snap’s advertising revenue. Despite this knowledge, Snap continues to update its product

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22 represents our greatest opportunity to improve the way people live and communicate.”); *Join Team*
23 *Snap*, Snap Inc. (Mar. 13, 2023), <https://careers.snap.com/?lang=en-US>
24 [<https://web.archive.org/web/20230313191205/https://careers.snap.com/?lang=en-US>] (“We believe
that reinventing the camera represents our greatest opportunity to improve the way people live and
communicate.”).

25 ⁶⁷⁰ Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017),
26 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

27 ⁶⁷¹ Stuart Dredge, *What is Snapchat? CEO Evan Spiegel explains it all for parents*, Guardian (June
28 17, 2015), [https://www.theguardian.com/technology/2015/jun/17/what-is-snapchat-evan-spiegel-](https://www.theguardian.com/technology/2015/jun/17/what-is-snapchat-evan-spiegel-parents)
[parents](https://www.theguardian.com/technology/2015/jun/17/what-is-snapchat-evan-spiegel-parents).

1 and add features intentionally designed to entice, exploit, and addict kids, including Snap Streaks,
2 trophies, social signifiers and reward systems, quickly disappearing messages, filters, lenses, and
3 games.

4 473. Snap knew, or should have known, that its conduct has negatively affected youth.
5 Snap’s conduct has been the subject of inquiries by the United States Senate⁶⁷² Senators from
6 across the ideological spectrum have introduced bills that would ban many of Snapchat’s features
7 that are particularly addictive to adolescents.⁶⁷³

8 474. Despite these calls for oversight from Congress, Snap has failed to curtail its use of
9 features such as streaks, badges, and other awards that reward users’ level of engagement with
10 Snapchat. As described in detail below, Snapchat is a product that causes harm to children, the
11 target audience for whom Snap designed it and to whom Snap promoted its product.

12 **2. Snap targets children.**

13 **a. Snap designed its Snapchat platform to grow use by children to drive the**
14 **company’s revenue.**

15 475. Within five months of launching, Snapchat had 40,000 users.⁶⁷⁴ By May 2012, less
16 than eight months after launching, CEO Evan Spiegel reported that the company was “thrilled” to
17 learn that most of Snapchat’s users were high school students sending “behind-the-back photos of
18 teachers and funny faces” to each other during class.⁶⁷⁵ According to Spiegel, Snap’s server data
19 showed peaks of activity during the school day.⁶⁷⁶

20 ⁶⁷² Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and*
21 *TikTok*, NPR (Oct. 26, 2021), [https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-](https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing)
[youtube-congress-child-safety-hearing](https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing).

22 ⁶⁷³ See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, NPR (Aug.
23 3, 2019), [https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-](https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill)
[addiction-with-new-bill](https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill); see also Social Media Addiction Reduction Technology Act, S. 2314, 116th
24 Cong. (2019); Kids Internet Design and Safety Act, S. 2918, 117th Cong. (2021).

25 ⁶⁷⁴ Ken Auletta, *Get Rich U*, New Yorker (Apr. 30, 2012),
<https://www.newyorker.com/magazine/2012/04/30/get-rich-u> [<https://perma.cc/K83B-66MX>].

26 ⁶⁷⁵ Evan Spiegel, *Let’s Chat*, Snapchat Blog (May 9, 2012), <http://blog.snapchat.com>
27 [<https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/>].

28 ⁶⁷⁶ *Id.*

1 476. Snap immediately focused on increasing the platform’s frequency of use.⁶⁷⁷ By late
2 2012, Snapchat had over a million active users sending over 20 million Snaps per day.⁶⁷⁸ By 2013,
3 Snapchat users were sending over 60 million Snaps per day.⁶⁷⁹ By the end of 2022, this number
4 had risen to over 5 billion Snaps per day.⁶⁸⁰

5 477. As Snap continued to quickly add new features to its platform, the number of
6 Snapchat’s daily active users (users who open Snapchat at least once during a 24-hour period)
7 rapidly increased.⁶⁸¹ In 2017, Snap reported that its users opened the platform more than 18 times
8 a day on average. By 2019, users were opening the platform an average of 30 times per day.

9 Snapchat Innovation Timeline 2011–2016.⁶⁸²

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20 ⁶⁷⁷ Billy Gallagher, *You Know What’s Cool? A Billion Snapchats: App Sees Over 20 Million Photos*
21 *Shared Per Day, Releases On Android*, TechCrunch (Oct. 29, 2012),
<https://techcrunch.com/2012/10/29/billion-snapchats/>.

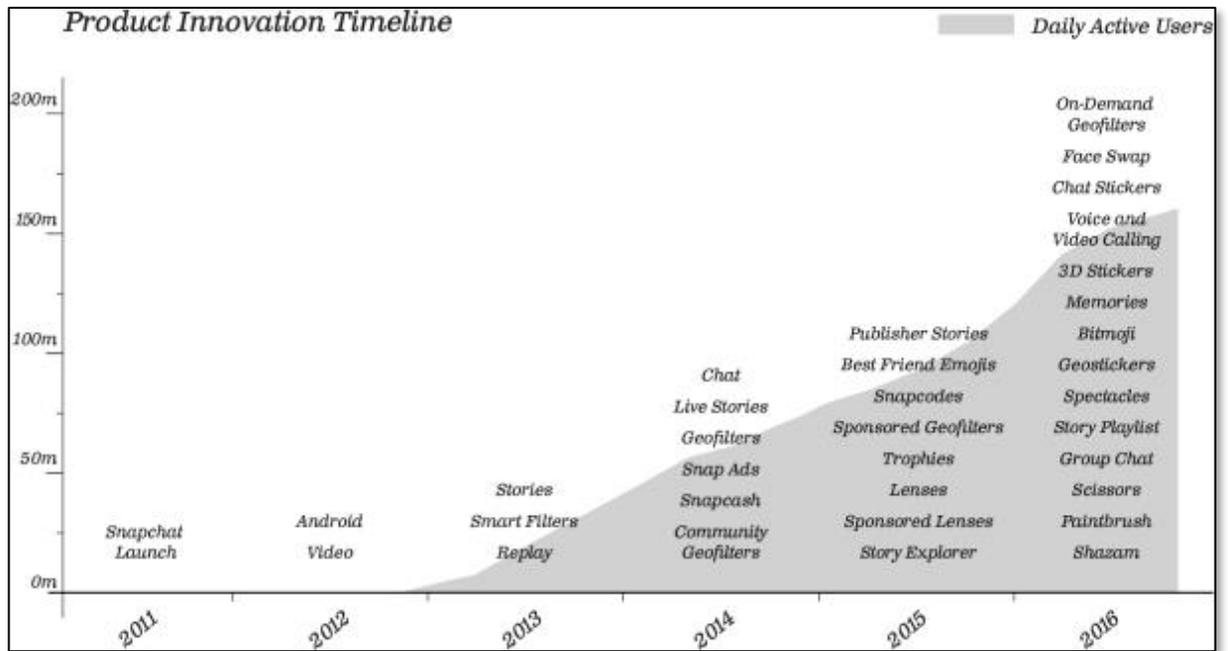
22 ⁶⁷⁸ *Id.*

23 ⁶⁷⁹ Billy Gallagher, *Snapchat Raises \$13.5M Series A Led By Benchmark, Now Sees 60M Snaps Sent*
24 *Per Day*, TechCrunch (Feb. 8, 2013), <https://techcrunch.com/2013/02/08/snapchat-raises-13-5m-series-a-led-by-benchmark-now-sees-60m-snaps-sent-per-day/>.

25 ⁶⁸⁰ *Snap Inc. Q4 2022 Transcript* at 7, Snap Inc. Inv. Rels. (Jan. 31, 2023),
<https://s25.q4cdn.com/442043304/files/transcript/snap-inc.-q4-2022-transcript.pdf>.

26 ⁶⁸¹ Snap Inc., Registration Statement (Form S-1) at 91 (Feb. 2, 2017),
27 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

28 ⁶⁸² *Id.*



478. Today, Snapchat is one of the world’s most widely used apps. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.⁶⁸³ Snapchat also “reaches 90% of the 13 to 24-year-old population” in over twenty countries, and reaches nearly half of all smartphone users in the United States.⁶⁸⁴

479. Snapchat’s explosive growth is driven by its key user demographic, 13- to 17-year-olds. In 2022, 59% of U.S. teens used Snapchat and 15% said they used it “almost constantly.”⁶⁸⁵ Snapchat proudly touts its influence over what it calls the “Snapchat Generation” (“Gen Z”).⁶⁸⁶

480. In 2014, Snap began running advertisements on Snapchat.⁶⁸⁷ Snapchat’s entire

⁶⁸³ Snap Inc. Investor Presentation October 2022 at 5, Snap Inc. Inv. Rels. (Oct. 20, 2022), [https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Deck-\(10.20.2022\).pdf](https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Deck-(10.20.2022).pdf).

⁶⁸⁴ *Id.* at 6, 35.

⁶⁸⁵ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

⁶⁸⁶ SNAP0000137 at SNAP0000139.

⁶⁸⁷ Paul Szoldra, *Here’s The First Ad To Hit Snapchat*, Bus. Insider (Oct. 18, 2014), <https://www.businessinsider.com/snapchat-ad-2014-10>.

1 business model revolves around its advertising revenue. According to internal company records,
2 advertisements were pervasive on Snapchat by 2015 and, by 2018, 99% of Snap’s total revenue
3 came from advertising. Advertising has accounted for 99% of Snap’s revenue each year since
4 2018.⁶⁸⁸ In 2022, Snap’s revenue was approximately \$4.6 billion.⁶⁸⁹

5 481. Snap attracts advertisers by providing them access to the huge universe of Snapchat
6 users and by collecting immense amounts of data on its users, including its pre-teen and teenage
7 users, which it uses to target advertising to those users. Snap makes no secret of this practice,
8 recently acknowledging that:

9 [Snap] rel[ies] heavily on our ability to collect and disclose data, and metrics to our
10 advertisers so we can attract new advertisers and retain existing advertisers. Any
11 restriction or inability, whether by law, regulation, policy, or other reason, to collect
12 and disclose data and metrics which our advertisers find useful would impede our
13 ability to attract and retain advertisers.⁶⁹⁰

14 482. Snap’s growth in advertising revenues was driven by changes Snap made to
15 Snapchat that incentivized compulsive and addictive use at the expense of its users’ health. Snap’s
16 internal research indicates the Snapchat experience is “more immersive” than its competitors’
17 apps. This means users are more likely than on other apps to keep watching videos (and
18 advertising).⁶⁹¹ The same research shows that Snapchat’s daily active users are constantly using its
19 platform; compared to other apps, users are most likely to use Snapchat “[r]ight when [they] wake
20 up,” “[b]efore work/school,” “[d]uring work/school,” “[a]fter work/school,” “[o]n vacations,” and
21 “[w]hen [they’re] with others[.]”⁶⁹²

22 483. Snap understands that its user experience must be immersive and all-encompassing
23 to maximize its advertising revenue. Indeed, Snap recently admitted to its investors that its

23 ⁶⁸⁸ Snap Inc., Annual Report (Form 10-K) at 15 (Dec. 31, 2022),
24 <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf>.

25 ⁶⁸⁹ *Id.* at 57.

26 ⁶⁹⁰ *Id.* at 15.

27 ⁶⁹¹ *See* SNAP0000103 at SNAP0000122–SNAP0000124, SNAP0000132.

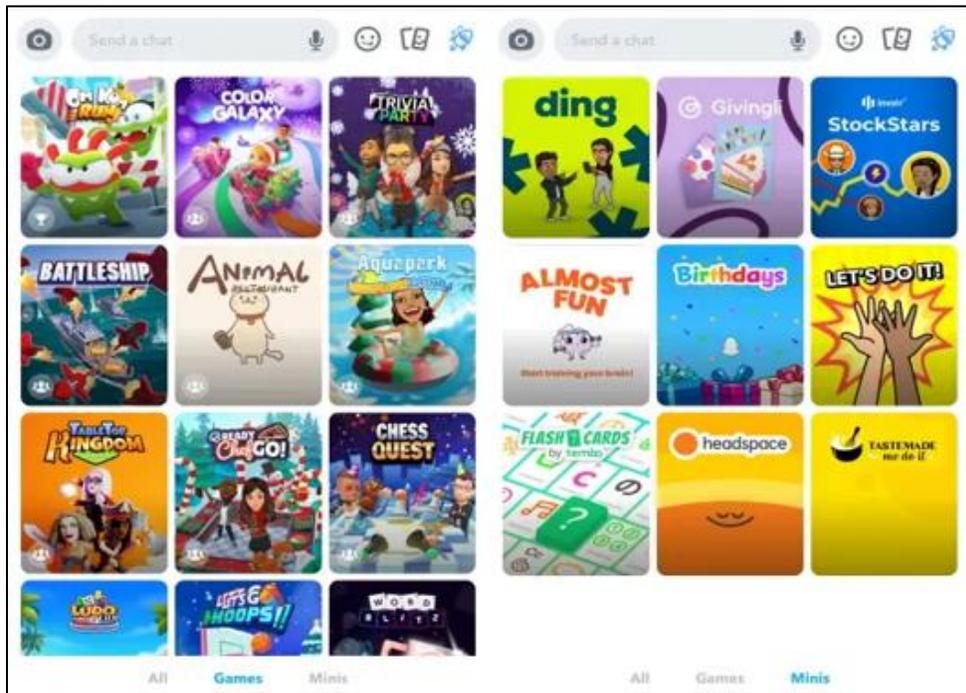
28 ⁶⁹² SNAP0000103 at SNAP0000113.

1 revenue could be harmed by, among other things, “a decrease in the amount of time spent on
2 Snapchat, a decrease in the amount of content that our users share, or decreases in usage of our
3 Camera, Visual Messaging, Map, Stories, and Spotlight platforms[.]”⁶⁹³

4 **b. Snap promotes Snapchat to children.**

5 484. Snap specifically promotes Snapchat to children because they are a key demographic
6 for Snap’s advertising business. In its first post on its website, Snapchat observed that “[t]o get a
7 better sense of how people were using Snapchat and what we could do to make it better, we
8 reached out to some of our users. We were thrilled to hear that most of them were high school
9 students who were using Snapchat as a new way to pass notes in class—behind-the-back photos of
10 teachers and funny faces were sent back and forth throughout the day.”⁶⁹⁴

11 485. As shown in this capture of a Snapchat feature page created by Snap, Snap uses
12 bright colors, cartoonish designs, and other features that appeal to younger audiences.



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25 ⁶⁹³ Snap Inc., Annual Report (Form 10-K) at 16 (Dec. 31, 2022),
26 <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf>.

27 ⁶⁹⁴ Evan Spiegel, *Let’s Chat*, Snapchat Blog (May 9, 2012), <http://blog.snapchat.com>
28 [<https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/>].

1 486. Snap also added as a feature the ability for users to create cartoon avatars modeled
2 after themselves.⁶⁹⁵ By using an artform generally associated with and directed at younger
3 audiences, Snap further designed Snapchat to entice teenagers and younger children.

4 487. In addition to its marketing, Snap has targeted a younger audience by designing
5 Snapchat in a manner that older individuals find hard to use.⁶⁹⁶ The effect of this design is that
6 Snapchat is a platform where its young users are insulated from older users including their
7 parents. As Snap’s CEO explained, “[w]e’ve made it very hard for parents to embarrass their
8 children[.]”⁶⁹⁷

9 488. Snap also designed Snapchat as a haven for young users to hide activity from their
10 parents by ensuring that photos, videos, and chat messages quickly disappear. This design further
11 insulates children from adult oversight.

12 489. In an October 2019 interview, Snap’s CEO explained that “we’ve seen a lot of
13 engagement with our 13-34 demographic, which for us is strategically a critical demographic, not
14 only because that’s a demographic that enjoys using new products but also because I think they
15 represent, really, the future . . . So that’s obviously been a group that’s been really fun to build for,
16 and really it started because those are our friends.”⁶⁹⁸

17 490. Snap touts to advertisers its ability to use Snapchat to reach children. In a December
18 2022 statement to advertisers, Snap claimed that “Snapchat delivers on the emotions that Gen Z
19 seeks and it does so consistently across the platform in areas like Discover, Stories and the
20

21 ⁶⁹⁵ Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, Bus. Insider
22 (July 19, 2016), <https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7>.

23 ⁶⁹⁶ See Hannah Kuchler & Tim Bradshaw, *Snapchat’s youth appeal puts pressure on Facebook*, Fin.
24 Times (Aug. 21, 2017), <https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787>
[<https://perma.cc/RX3U-RXGN>].

25 ⁶⁹⁷ Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, Bloomberg
26 (Mar. 3, 2016), <https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/>
[<https://perma.cc/6KVZ-P8G7>].

27 ⁶⁹⁸ *Evan Spiegel, Co-Founder and CEO of Snap Inc.*, Goldman Sachs at 5:02–5:35 (Oct. 2, 2019),
28 <https://www.youtube.com/watch?v=PQiKv-GCQ-w>.

1 Camera.”⁶⁹⁹ To prove that, Snapchat “used a neuroscience measurement called ‘immersion’ to
2 measure reactions to different brand messaging—specifically brand purpose messaging vs. non-
3 brand purpose messaging. Immersion captures attention and emotional resonance through
4 variations in heart rate rhythm collected by smartwatches.”⁷⁰⁰ Per Snapchat, “[a]ny brand or
5 marketer can get on any app and *start targeting Gen Z*. After all, Gen Z is digitally native. But to
6 effectively connect and engage with this generation, that takes a different, more intentional type of
7 platform: Snapchat.”⁷⁰¹

8 491. Advertisers have responded, pouring into Snapchat money clearly intended for
9 advertising aimed at children. Brands like candy manufacturer Sour Patch Kids, children’s toy
10 store ToysRUs, and sugary beverage seller Kool-Aid have all run successful advertising
11 campaigns through Snapchat, frequently using augmented reality tools developed in collaboration
12 with Snapchat.

13 492. Despite marketing to children, Snapchat’s age verification systems are ineffective at
14 best. For the first two years of its existence, Snap did not even purport to limit user access to those
15 13 or older.⁷⁰² Users were not required to input a date of birth when creating an account.⁷⁰³

16 493. In 2013, Snap belatedly introduced age limits (which, as explained below, it does not
17 effectively enforce). At the same time, Snap launched a new feature called “Snapkidz” aimed at
18 and designed to attract younger child users, while hedging against the potential user loss due to the
19 new age limits. The Snapkidz feature allowed children under the age of 13 to take filtered photos,
20 draw on them, save them locally on their devices, send them to others, and upload them to other
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22 ⁶⁹⁹ *What Does Gen Z Want From Brands?*, Snap Inc. (Dec. 15, 2022),
23 <https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want>.

24 ⁷⁰⁰ *Id.*

25 ⁷⁰¹ *Id.* (emphasis added).

26 ⁷⁰² Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013),
27 <http://blog.snapchat.com/>
28 [<https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/>].

⁷⁰³ *Id.*

1 apps.⁷⁰⁴ Although this version prevented children from sharing “Snaps” on the platform, it
2 nonetheless exposed children to Snapchat’s features, which normalized and acclimatized children
3 to using Snapchat. In addition, nothing prevented children from creating an unrestricted account
4 with a false date of birth on Snapchat and using the platform outside the SnapKidz’s limited
5 features.⁷⁰⁵

6 494. The SnapKidz feature was discontinued in or around 2016. Snap now purports to
7 prohibit users under the age of 13. But nothing prohibits the minor user from simply altering their
8 birthdate during the same session where they were just denied an account for being an underage
9 user. Snap could have implemented robust, effective age verification protocols. Instead, it has set
10 up its business and platform so that there is no genuine effort to verify the age of its users or to
11 enforce its age limitations. Snap could, but intentionally does not, verify the phone number, email
12 address, or birthdate used to create accounts, and it allows users to create multiple accounts using
13 the same email address or phone number. In contrast, Snap will only cutoff a user from its
14 platform based on age if Snap has “actual knowledge that [the user is] under the age of 13[.]”⁷⁰⁶

15 495. Snap’s executives have admitted that Snapchat’s age verification “is effectively
16 useless in stopping underage users from signing up to the Snapchat app.”⁷⁰⁷ Not surprisingly,
17 underage use is widespread. As of 2021, 13% of children ages 8–12 use Snapchat.⁷⁰⁸

18 ⁷⁰⁴ *Id.*

19 ⁷⁰⁵ See Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23,
20 2013), <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a> [<https://perma.cc/3BWG-6Q6S>]; Anthony Cuthbertson,
21 *Snapchat admits its age verification system does not work*, Indep. (Mar. 19, 2019),
22 <https://www.independent.co.uk/tech/snapchat-age-verification-not-work-underage-ageid-a8829751.html>.

23 ⁷⁰⁶ *Snap Terms of Service*, Snap Inc. (Aug. 15, 2023), <https://snap.com/en-US/terms>.

24 ⁷⁰⁷ Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*,
25 Bus. Insider (Mar. 19, 2019), <https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3>.

26 ⁷⁰⁸ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 5,
27 Common Sense Media (2022),
28 https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

1 496. Once Snapchat is installed on a user’s mobile phone, the platform continues to
2 download and install updates, design changes, and new features from Snapchat directly to its
3 users.

4 497. Similarly, the absence of effective age-verification measures means that users who
5 are older can claim to be children—which is an obvious danger to the actual children on Snap’s
6 platform.

7 **3. Snapchat is designed to addict children through psychological manipulation.**

8 498. Once Snap entices children to use its platform, it uses a series of platform features
9 that are designed to addict children. As laid out below, those features can be broadly grouped into
10 two categories that exploit techniques discussed earlier in this Complaint. The first are social
11 metrics and other similar psychological manipulation techniques. The second are features
12 designed to encourage endless passive usage of the Snapchat platform. These features, in tandem
13 with each other and the other harmful features described throughout this section and Complaint,
14 induce addiction, compulsive use, and other severe mental and physical harm to young users of
15 the Snapchat platform, including students in NYC Plaintiffs’ schools and community.

16 **a. Snap designed Snapchat to drive compulsive use through a set of social**
17 **metrics and other manipulation techniques that induce compulsive use.**

18 499. Snapchat includes a variety of social metrics—such as Snapscores, Snap Streaks, and
19 Snap Awards—that reward users when they engage with Snapchat and punish them when they fail
20 to engage with Snapchat. Internal research by Snap has found these psychological manipulation
21 techniques are highly effective at instilling anxiety about not using Snapchat frequently enough—
22 and competitor research has confirmed these features are addictive. In tandem with IVR, e.g., push
23 notifications, and design choices that make it difficult to stop using the Snapchat platform, these
24 induce compulsive use of the platform by children.

25 500. These manipulation techniques are so effective in part because Snapchat’s
26 disappearing messages themselves create a compulsion to engage with the Snapchat platform.
27 Because Snaps typically disappear within ten seconds of being viewed, users feel compelled to
28 reply immediately. Snap activates the psychological desire to reciprocate the social gesture of

1 sending a Snap.⁷⁰⁹ Snapchat also tells users each time they receive a Snap by pushing a
2 notification to the recipient’s device. These notifications are designed to prompt users to open
3 Snapchat repetitively, increasing the overall time spent on the app.

4 (i) *Snapcores*

5 501. Snapcores were one of the earliest features of the Snapchat platform. Almost as
6 soon as Snapchat launched, Snap gave users the ability to draw and color on Snaps and add a short
7 text caption before sending. An Android version of the app, video sharing, and user profiles with
8 “Snapcores” soon followed.⁷¹⁰

9 502. Originally called “Hiscore,” Snapscore keeps a running profile score based on a
10 user’s Snapchat activity levels, such as the number of Snaps sent and received or Stories posted.⁷¹¹
11 The sole purpose of Snapscore is to increase platform use and drive revenue.⁷¹²

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21 ⁷⁰⁹ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 13, 2015),
<https://www.nirandfar.com/psychology-of-snapchat/>.

22 ⁷¹⁰ Snap Inc., Registration Statement (Form S-1) at 91 (Feb. 2, 2017),
23 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>; Katie
24 Notopoulos, *The Snapchat Feature That Will Ruin Your Life*, BuzzFeed News (Dec. 5, 2012),
<https://www.buzzfeednews.com/article/katienotopoulos/the-snapchat-feature-that-will-ruin-your-life>.

25 ⁷¹¹ Snapchat Support, *What is a Snap Score?*, Snap Inc. (“Your Snapchat score is determined by a
26 super-secret, special equation . . . ☹”), <https://support.snapchat.com/en-US/a/my-score>.

27 ⁷¹² Brad Barbz, **2020 NEW * How To Increase Snapscore By Up To 1000 Per Minute On IOS And*
28 *Android – Working 2020*, YouTube (Dec. 4, 2019),
https://www.youtube.com/watch?v=Mo_tajuofLA.



503. Although Snap does not disclose precisely how Snapscores work, sending and receiving a Snap increases the score by one point. Interacting with other platform features provides additional points. A user’s Snapscore is visible on their profile, serves as a signifier of the user’s “worth,” and encourages users to further engage with Snapchat’s features to increase their score. Snapscores are important to users, especially young users, because they operate as a form of social validation, similar to an Instagram “Like.” Google has reported millions of searches for “How to improve Snap score.” YouTube contains numerous videos with titles like: *How to Increase Snapchat Score Fast*.⁷¹³

504. Snapscores also reward users who post videos that are viewed extensively. This encourages many to use Snapchat in harmful and dangerous ways, to increase the virality of their videos and increase their Snapscore. As more users engage with and forward that video to others, its creator is awarded with an increased Snapscore. Snapchat’s rewards incentivize this dangerous behavior, resulting too often in physical harm or humiliation in the obsessive pursuit of social significance.

⁷¹³ FozTech, *How to Increase Snapchat Score Fast! (100% Works in 2023)*, YouTube (Oct. 1, 2019), <https://www.youtube.com/watch?v=m7s0hvQdTok> (*How to Increase Snapchat Score Fast* has 4.4 million views as of Dec. 5, 2023).

1 (ii) *Trophies, Charms, and Stickers*

2 505. Snap has also designed Snapchat to include user rewards, including trophies and
3 other social recognition signals, similar to “Likes” on other apps. These features are highly
4 addictive and drive compulsive use.

5 506. “Trophies” are emojis awarded for achieving engagement milestones or performing
6 certain activities, such as increasing one’s Snapscore, sending creative Snaps, or posting a live
7 story. A user’s “Trophies” are displayed in a “trophy box” viewable by their friends. Snap
8 designed this feature to encourage users to share their videos and posts with the public, promote
9 greater use of Snapchat, and deepen young users’ addiction to and compulsive use of the platform.

10 507. In 2020, Snap phased out Trophies and replaced them with “Charms.” Unlike
11 Trophies, where users were rewarded for unlocking individual accomplishments like sending
12 1,000 selfies, Charms reward users for achieving certain milestones in their relationship with other
13 users. Typically, the more users interact with one another, the more Charms they unlock in their
14 relationship. Charms are private and viewable only by users’ mutual contacts.

15 508. For example, if two users are at the top of each other’s friends list, meaning they
16 exchange frequent Snaps, they may unlock a “BFF (Best Friends Forever)” Charm. Conversely,
17 the “It’s Been Forever” and “It’s Been a Minute” Charms may be awarded to friends who are
18 infrequently in contact, to prompt their engagement with one another on Snapchat. Although there
19 are a number of different Charms awarded for various reasons, all of them encourage user
20 interaction, furthering engagement and buy-in to Snap’s reward system. This in turn exacerbates
21 social-comparison harms and undermines self-esteem.

1 teenagers[.]”⁷¹⁴ Snapchat streaks provide a reward to users based on how many consecutive days
2 they communicate with another user. In other words, the longer two users are able to maintain a
3 streak by exchanging a communication (a “snap”) at least once a day, the more rewarded the users
4 are. The reward comes in the form of a cartoon emoji appearing next to the conversation within
5 Snapchat’s interface. The longer the streak is maintained, the more exciting the emoji. Eventually,
6 the emoji will change to a flame, and the number of days the streak has lasted will be positioned
7 next to the flame. If users reach a Streak of 100 days, for example, each receives a 100 emoji.

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22 ⁷¹⁴ See *Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27,
23 2017), [https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-](https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296)
24 *streaks/story?id=48778296*; Avery Hartmans, *These are the sneaky ways apps like Instagram,*
25 *Facebook, Tinder lure you in and get you ‘addicted’*, Bus. Insider (Feb. 17, 2018), **Error! Hyperlink**
26 **reference not valid.**[https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)
27 *smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13*; see generally Virginia
28 Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app*
trade, CBC (Nov. 3, 2017), <https://www.cbc.ca/news/science/marketplace-phones-1.4384876>; Julian
Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
<https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

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What Snapchat's Emojis Mean



Best Friends. This means you're each other's fave person to send Snaps.



You've been each other's best friend for 2 weeks+.



Gettin' serious. You've been each other's best friend for 2 months+.



Jealous much? Your best friend is also this person's best friend.



You're close. Not best-friends close, but you dig each other enough to count.



It's cool. You run in the same circles and share a close friend.



You have the upper hand. They send you more Snaps than anyone, but you send more Snaps to others.



Snapstreak. This appears with a # of days you and your friend have sent each other Snaps within 24 hours. Keep it going and watch the number (and pressure to continue) rise.



Warning! You both better send each other a Snap, or you'll kill your streak.



11 Worse still, to manufacture deeper addiction to its platform, Snap sends notifications to users with an
 12 hourglass emoji when Streaks are about to expire—to create extra urgency, nudge users to keep their
 13 Streaks alive, and maintain a system where a user must “check constantly or risk missing out.”⁷¹⁵



22 513. This feature hijacks teens’ craving for social success and connectedness and causes
 23 teen users to feel pressure to use Snapchat daily or suffer social consequences. As some academics
 24 and mental health treatment providers have described, streaks “provide a validation for the
 25 relationship. . . . Attention to your streaks each day is a way of saying ‘we’re OK.’ . . . The makers

26 ⁷¹⁵ Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017),
 27 <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>
 28 [<https://perma.cc/HQZ8-K78U>].

1 built into the app a system so you have to check constantly or risk missing out,” said Nancy
2 Colier, a psychotherapist and author of *The Power of Off*. “It taps into the primal fear of
3 exclusion, of being out of the tribe and not able to survive.”⁷¹⁶ For teens, streaks can become a
4 metric for self-worth and popularity. By design, the user’s mental wellbeing becomes connected to
5 performance in Snap’s platform. Snap Streak emojis are similar to Charms in that they reward
6 users for interaction and are viewable only by mutual friends.

7 514. It is a matter of common knowledge in the social media industry that the Snap Streak
8 platform feature is designed to be addictive. Meta bluntly acknowledged as much in its internal
9 documents, stating, “[s]treaks are a very important way for teens to stay connected. They are
10 usually with your closest friends and they are addictive.”⁷¹⁷ Nonetheless, Snap continues to
11 provide this feature to its adolescent users.

12 515. This feature is particularly effective with teenage users since Streaks are “a vital part
13 of using the app, and of their social lives as a whole.”⁷¹⁸ Some children become so obsessed with
14 maintaining their Streaks that they give their friends access to their accounts when they may be
15 “unable to maintain their own streaks[.]”⁷¹⁹ Aware of how important maintaining a Snap Streak is
16 to its users, Snap has even launched a special form on its support website allowing users who lost
17 their streak to petition to get it back.⁷²⁰

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19 ⁷¹⁶ Jon Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June
20 9, 2017), <https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked>.

21 ⁷¹⁷ Haugen_00008303 at Haugen_00008307.

22 ⁷¹⁸ Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in
23 and get you ‘addicted’*, *Bus. Insider* (Feb. 17, 2018), <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>.

24 ⁷¹⁹ Caroline Knorr, *How to resist technology addiction*, *CNN* (Nov. 9, 2017),
25 <https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html>; Jon Brooks,
26 *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9, 2017),
<https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked>.

27 ⁷²⁰ Snapchat Support, *Submit a request*, Snap Inc., <https://support.snapchat.com/en-US/i-need-help?start=5695496404336640>.
28

1 higher levels of anxiety and low self-esteem after doing so. This evaluation of self-
2 worth translates to the participant checking Snap Map to confirm or deny their
3 beliefs, and then experiencing negative emotional responses after making a
4 comparison to their friends' location. Snap Map . . . [is] associated with increased
5 feelings of jealousy and anger in users. Participants expressed how immediate access
6 to locational information directly impacted their mood, especially when they saw
7 something that confirmed their doubts. Something interesting to note is that even
8 when participants were aware of the negative feelings that could arise after checking
9 Snap Map, their desire to confirm or deny self-doubt exceeded concerns over these
10 potential consequences.⁷²³

11 520. Researchers have found that Snap Map causes feelings of sadness and anxiety for
12 some users, as they jealously view their friends' locations.⁷²⁴ Snap Map also functions as a social
13 metric. A report by 5Rights, a United Kingdom-based children's online safety advocacy group
14 highlighted the experience of John, a 14-year-old boy, who explained that "[h]aving more
15 connections on Snapchat makes his Snap Map look more crowded, which he can then show off to
16 people in real life and therefore appear more 'popular.'"⁷²⁵

17 (v) *Push Notifications*

18 521. In addition to Snapchat's in-app reward features, Snap also sends push notifications
19 and emails to encourage addictive engagement and increase use. Notifications are triggered based
20 on information Snap collects from, and about, its users. Snap "pushes" these communications to
21 users excessively and at disruptive times of day. Snap has even designed the format of these
22 notifications to pull users back onto its app by preying on their fear of missing out—never mind
23 the consequences to their health and well-being.

24 (vi) *Impediments to Discontinuing Use*

25 522. Snap has intentionally designed its platforms so child users face significant

26 ⁷²³ Jenna Sachs, *Psychological Repercussions of Location-Based Social Networks in Today's Youth*,
27 9 *Elon J. Undergraduate Rsch. Commc'ns* 64, 72–73 (2018),
28 <https://eloncdn.blob.core.windows.net/eu3/sites/153/2018/12/06-Sachs.pdf>.

⁷²⁴ See Tasha R. Dunn & Michael R. Langlais, "Oh, Snap!": *A Mixed-Methods Approach to Analyzing the Dark Side of Snapchat*, 9(2) *J. Soc. Media Soc'y* 69–104 (2020),
<https://thejsms.org/index.php/JSMS/article/view/633/371>.

⁷²⁵ *Pathways: How digital design puts children at risk* at 53, 5Rights Found. (July 2021),
<https://5rightsfoundation.com/uploads/Pathways-how-digital-design-puts-children-at-risk.pdf>.

1 navigational obstacles and hurdles when trying to delete or deactivate their Snapchat accounts,
2 despite the ease with which a user can create one. For example, when a user elects to delete their
3 account, they cannot do so on demand. The data and the account are preserved for 30 days. In
4 addition, after initiating the deletion process, the user is presented with a black screen depicting a
5 crying emoji and a message that reads, “Your account will be deactivated, which means friends
6 won’t be able to contact you on Snapchat. You’ll also lose any Chats you’ve saved and Snaps and
7 Chats you haven’t opened.”⁷²⁶

8 523. This cumbersome process prioritizes user retention and continued use over the well-
9 being of Snapchat’s users.

10 **b. Snap’s features are designed to promote compulsive and excessive use.**

11 (i) *“Stories” and the “Discover” Interface*

12 524. In October 2013, Snap added “Stories,” a feature that generates a compilation of its
13 users’ designated photos and videos that expire in 24 hours and can be viewed an unlimited
14 number of times by friends or anyone on Snapchat if the user sets the visibility setting to
15 Everyone.⁷²⁷ Within eight months of launching the Stories feature, users were viewing more
16 Stories per day than Snaps.⁷²⁸

17 525. Snap’s Stories feature includes a running view count and list of viewers for each
18 Story, both of which provide users with dopamine-triggering feedback that encourages users to
19 make their Stories visible to everyone in order to increase the view count. The view count, view
20 list, and ephemeral nature of Stories also reinforces the principle of reciprocity and compels users

22 ⁷²⁶ See Snapchat Support, *How do I delete my Snapchat account?*, Snap Inc. (May 31, 2023),
23 <https://support.snapchat.com/en-US/a/delete-my-account1>
24 [[https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-](https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-us/articles/7012328360596)
25 [us/articles/7012328360596](https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-us/articles/7012328360596)].

25 ⁷²⁷ Darrell Etherington, *Snapchat Gets Its Own Timeline With Snapchat Stories, 24-Hour Photo &*
26 *Video Tales*, TechCrunch (Oct. 3, 2013), [https://techcrunch.com/2013/10/03/snapchat-gets-its-own-](https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-with-snapchat-stories-24-hour-photo-video-ales/)
27 [timeline-with-snapchat-stories-24-hour-photo-video-ales/](https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-with-snapchat-stories-24-hour-photo-video-ales/).

28 ⁷²⁸ Ellis Hamburger, *Surprise: Snapchat’s most popular feature isn’t snaps anymore*, Verge (June
29 20, 2014), [https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-](https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival)
30 [electric-daisy-carnival](https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival).

1 to monitor Stories, so they do not miss out.

2 526. In 2016, Snap updated the Stories feature to include recommendations based on an
3 algorithm that considers “proximity, time, interestingness, or other such metrics.”⁷²⁹ That same
4 year, Snap introduced ads between Stories and updated Stories to include “Auto-Advance,” a
5 feature that starts a new Story automatically after the preceding one ends.⁷³⁰ This creates an
6 endless cycle of consumption that Snap knows, or should know, is detrimental to users’ mental
7 health.⁷³¹ Nevertheless, Snap designed and implemented this feature because it is proven to induce
8 a flow state that increases platform use, regardless of whether the use is healthy or enjoyable.
9 Unsurprisingly, one study of over 2,000 UK residents found “68 per cent of respondents who used
10 Snapchat reported that ‘the platform prevented them from sleeping.’”⁷³²

11 527. Since then, Snap has built upon its Stories interface with “Discover,” a feature that
12 showcases a massive and immersive feed of advertisements to Snapchat’s captive audience. Using
13 Discover, users may subscribe to an advertiser’s “channel” and watch its Stories; as well as see
14 what their friends are watching.

15 528. Both Stories and Discover encourage user engagement with Snapchat and increase
16 the amount of time users spend using the platform by making the platform more addictive at the
17 expense of users’ mental health and well-being.

19 ⁷²⁹ Snapchat, Inc., *Content Collection Navigation and Autoforwarding*, U.S. Patent Application No.
20 20170289234 (filed Mar. 29, 2016), [https://image-ppubs.uspto.gov/dirsearch-
public/print/downloadPdf/20170289234](https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234).

21 ⁷³⁰ James Vincent, Snapchat will start showing ads between your friends’ stories, Verge (June 14,
22 2016), <https://www.theverge.com/2016/6/14/11930386/snapchat-ads-api-stories>; Snapchat, Inc.,
23 *Content Collection Navigation and Autoforwarding*, U.S. Patent Application No. 20170289234
(filed Mar. 29, 2016), [https://image-ppubs.uspto.gov/dirsearch-
public/print/downloadPdf/20170289234](https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234).

24 ⁷³¹ See, e.g., Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated
25 mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC
26 *Psychiatry* 279 (2022), [https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-
00990-7.pdf](https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf).

27 ⁷³² Fraser Deans, *Curb Your Snapchat Addiction*, Wholesome Tech. Co. (2018),
28 <https://www.wholesome.design/advent-2018/2-curb-your-snapchat-addiction/>.

(ii) “Spotlight”

529. In November 2020, Snap launched “Spotlight,” a feature that pushes to users “an endless feed” that Snap curates from its 300 million daily Snapchat users.⁷³³ Spotlight functions and appears nearly identical to TikTok, with similar addictive qualities and harms. Snapchat’s Spotlight feature allows users to make videos that anyone can view, and Snap pays users whose Spotlight videos go viral, thus serving as yet another reward system that encourages user engagement. After Snap introduced Spotlight, user time spent on the platform increased by over 200%.⁷³⁴

530. In February 2022, Snap CEO Evan Spiegel told investors that users are spending more time on Spotlight than almost any other aspect of Snapchat. A year prior, Snap announced “Spotlight Challenges,” which provided users with cash prizes for creating Spotlight videos with specific lenses, sounds, or topics, further integrating the user into the Snap ecosystem. Snap claims it paid out more than \$250 million in cash prizes to Spotlight Challenge participants in 2021 alone.⁷³⁵

4. Snap designed Snapchat with features that harm children directly or expose children to harm.

531. Snapchat further contains a number of features which foreseeably cause children harm above and beyond harms inherent in addiction and compulsive use.

a. Disappearing “Snaps” and “My Eyes Only” thwart parental control and encourage destructive behavior among Snap’s teen users.

532. As discussed above, Snapchat’s “Snap” feature allows users to send and receive ephemeral, or “disappearing,” audiovisual messages. Prior to sending a Snap, a user can designate

⁷³³ Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC (Nov. 23, 2020), <https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html>.

⁷³⁴ See Zacks Equity Research, *SNAP Q4 Earnings Beat Estimates, User Growth Aids Top Line*, Yahoo! Fin. (Feb. 5, 2021), <https://finance.yahoo.com/news/snap-q4-earnings-beat-estimates-153003950.html>.

⁷³⁵ Mia Sato, *Snapchat will put ads within stories and share the money with creators*, Verge (Feb. 14, 2022), <https://www.theverge.com/2022/2/14/22927656/snapchat-snap-stars-stories-ads>.

1 the period of time—typically no more than a few seconds—that the recipient will be allowed to
2 view the Snap. According to Snapchat, once the allotted time expires, the Snap disappears forever.

3 533. Disappearing Snaps do not operate as advertised. Although designed to disappear
4 after an allotted time, recipients possess the ability to save or record them at will. This is
5 particularly harmful to adolescents, who rely on Snap’s representations when taking and sending
6 photos, and who only learn after the fact that recipients have the means to save photos or videos.

7 534. Snap could, but does not, warn users, including children and teenagers, that Snaps
8 may not disappear in all instances.

9 535. In addition, and especially for pre-teen users, Snapchat is dangerous because Snap’s
10 parental controls are ill-equipped to mitigate the risks posed by this feature. As set forth below,
11 even with parental controls activated, parents are unable to view a Snap and therefore cannot
12 adequately protect their children and/or deter their children from engaging in dangerous behavior
13 in conjunction with sending Snaps.

14 536. “My Eyes Only” is yet another dangerous feature of Snapchat. This feature enables
15 and encourages users to hide things from their parents in a special tab that requires a passcode.
16 Recovery is not possible from “My Eyes Only”—allegedly even by Snap itself. This dangerous
17 platform feature unreasonably increases the risk to Snapchat’s adolescent users, many under age
18 13.

19 537. The pictures and videos in “My Eyes Only” self-destructs if a user attempts to access
20 the hidden folder with the wrong code. “My Eyes Only” has no practical purpose or use other than
21 to hide potentially dangerous activity from parents and/or legal owners of the devices used to
22 access Snapchat. Moreover, while this information and evidence should be in Snap’s possession
23 and control, it has designed this feature in a way that causes the permanent loss of relevant,
24 material, and incriminating evidence.

25 **b. Snapchat’s “Quick Add” feature endangers children.**

26 538. Through a feature known as “Quick Add,” Snap has recommended new, sometimes
27 random friends, similar to Facebook’s “People You Might Know” feature. Suggestions are
28 formulated using an algorithm that considers users’ friends, interests, and location. Quick Add

1 encourages users to expand their friend base to increase their Snapscore by interacting with an
2 ever-expanding group of friends, which--in addition to expanding their time online--can result in
3 exposure to dangerous strangers. Of particular concern, until 2022, Quick Add's suggestions
4 included profiles for users Snap knew to be between the ages of 13–17, meaning that Quick Add
5 could, and in fact did, recommend that a minor and adult user connect.

6 539. Despite these dangers, Snap designed Quick Add because it increases the odds that
7 users will add friends, send more Snaps, and spend more time using Snapchat.

8 540. In 2022, Snap revised the Quick Add feature to limit the friend suggestions
9 promoted to minor users. For those aged 13 to 17, Quick Add would only suggest friends who
10 shared a certain number of common friends with the minor user. Snap did not disclose how many
11 common friends must be shared by each user to satisfy this safety feature. Further, this
12 modification to the Quick Add feature still does not prohibit the connection of minors with adults
13 and continues to drive additional time on the platform.

14 **c. Snapchat's Lenses and Filters features promote negative appearance**
15 **comparison.**

16 541. Snap also incorporates numerous custom-designed lenses and filters, which allow
17 users to edit and overlay augmented-reality special effects and sounds on their Snaps. Many of
18 Snapchat's lenses and filters change users' appearance and face, creating unrealistic, idealized
19 versions that cause profound body image issues in teenagers, especially girls.

20 542. Examples of these features include the Smoothing Filter, which blurs facial
21 imperfections and evens out skin tone; Bold Makeup, which adds makeup over the user's face,
22 blurs imperfections, and evens out skin tone; Sunkissed and Cute Freckles, which adds freckles
23 over the nose and cheeks, blurs imperfections, evens out skin tone, and adjusts skin color; Face
24 and Body Mellow Glow, which smooths the face and body and adjusts skin color; and Fluffy
25 Eyelashes, which alters the shape of the user's face by lifting their eyes and adding more
26 pronounced cheek bones. The common theme among all of these filters is that they remove the
27 subjects' perceived blemishes to create the perfect "selfie."
28



543. A 2017 study found that these features made Snapchat one of the worst social media platforms for the mental health of children and adolescents, behind only Instagram.⁷³⁶ In recent years, plastic surgeons have reported an increase in requests for alterations that correspond to Snapchat’s filters. This has led researchers to coin the term “Snapchat dysmorphia,” in which the effect of Snapchat’s filters triggers body dysmorphic disorder.⁷³⁷ The rationale underlying this disorder is that beauty filters on Snapchat create a “sense of unattainable perfection” that leads to

⁷³⁶ Kara Fox, *Instagram worst social media app for young people’s mental health*, CNN (May 19, 2017), <https://www.cnn.com/2017/05/19/health/instagram-worst-social-network-app-young-people-mental-health/index.html>.

⁷³⁷ Jonlin Chen *et al.*, *Association Between the Use of Social Media and Photograph Editing Applications, Self-esteem, and Cosmetic Surgery Acceptance*, 21 *JAMA Facial Plastic Surgery* 361–367 (2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6604085/?report=printable>; *see also* Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

1 self-alienation and damages a person’s self-esteem.⁷³⁸ One social psychologist summarized the
2 effect as “the pressure to present a certain filtered image on social media [which] can certainly
3 play into [depression and anxiety] for younger people who are just developing their identities.”⁷³⁹

4 544. Snap also created and promoted “smart filters” that allowed users to stamp date/time,
5 temperature, battery life, altitude, and speed on their Snaps.⁷⁴⁰ These filters utilize sensor data on
6 users’ devices to provide the desired filter stamp.

7 545. A particularly dangerous smart filter is the speed filter, which, from 2013 to 2021
8 allowed users to record their real-life speed and overlay that speed onto Snaps. Snap knew, or
9 should have known, that the speed filter served no purpose other than to motivate, incentivize,
10 and/or encourage users to drive at dangerous speeds in violation of traffic and safety laws. Indeed,
11 soon after launching its speed filter, the feature became a viral game for users—particularly
12 teenage users—to capture photos and videos of themselves driving at 100 miles-per-hour or more.
13 Tragically, the quest to capture a 100 mile-per-hour Snap caused a number of fatal vehicle
14 accidents involving teens and young adults.⁷⁴¹

15 546. Snap knew, or should have known, its speed filter created an unreasonable risk of
16 harm to its users and the public. Despite this knowledge, however, as well as pleas from the public
17 to disable the filter, Snap refused to remove speed filter from its application until 2021.⁷⁴²

18
19 ⁷³⁸ Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty*
20 *through filters*, ABC News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

21 ⁷³⁹ *Id.*

22 ⁷⁴⁰ See, e.g., Karissa Bell, *Snapchat adds an altitude filter to show how high you are*, Mashable
(Aug. 19, 2016), <https://mashable.com/article/snapchat-altitude-filter-how-to>.

23 ⁷⁴¹ *Did Snapchat play role in deaths of 3 young women?*, ABC6 Action News (Feb. 16, 2016),
24 <https://6abc.com/action-news-investigation-snapchat-fatal-car-crash-philadelphia/1196846/>;
25 Manpreet Darroch, *Snapchat and driving . . . you could be sending your last snap*, Youth Rd. Safety
26 (Apr. 25, 2016), <http://www.youthforroadsafety.org/news-blog/news-blog-item/t/snapchat-and-driving-hellip-you-could-be-sending-your-last-snap>; Brian Debelle, *The Most Dangerous App on Your Phone*, DistractedDriverAccidents.com (Feb. 9, 2016),
<https://distracteddriveraccidents.com/the-most-dangerous-app-on-your-phone/>.

27 ⁷⁴² Bobby Allyn, *Snapchat Ends ‘Speed Filter’ That Critics Say Encouraged Reckless Driving*, NPR
28 (June 17, 2021), <https://www.npr.org/2021/06/17/1007385955/snapchat-ends-speed-filter-that>
(footnote continued)

1 547. By including features like lenses, cartoonish filters, and stamps to attract ever-
2 increasing numbers of children to use and engage with its platform, Snap has knowingly created a
3 platform that leads to excessive use by children and teens and causes them to suffer harm.

4 **5. Snap implemented ineffective and misleading parental controls, further**
5 **endangering children.**

6 548. Snap designed and set up Snapchat with inadequate parental controls.

7 549. From Snapchat’s launch in 2011 until August 2022, Snapchat had no parental
8 controls even though its core user base was under the age of 18 and a significant number of those
9 users were under the age of 13.

10 550. In August 2022, Snap introduced the “Family Center.” The features and processes
11 offered through the Family Center are woefully inadequate to protect teen and pre-teen users. The
12 Family Center allows a parent or guardian to install Snapchat on their phone and then link to the
13 child’s account. The parent or guardian can then see who the child user is communicating with.
14 However, the substance of these communications remains hidden and still disappears after the
15 allotted time. In addition, the Family Center does not allow a parent or guardian to block minors
16 from sending private messages, control their child’s use or engagement with many of Snapchat’s
17 platform features, control their child’s use of Snapchat’s geolocation feature, or control who their
18 child may add to their friend list. Finally, the Family Center fails to help a parent monitor their
19 child’s account when the child has secretly created a Snapchat account without the parents’
20 knowledge in the first place.

21 **6. Snap failed to adequately warn NYC Plaintiffs and the public about the harms**
22 **its product causes or provide instructions regarding safe use.**

23 551. Since Snap’s inception, it has failed to adequately warn the public, including NYC
24 Plaintiffs and members of NYC Plaintiffs’ community, about its platforms’ physical and mental
25 health risks. These risks include, but are not limited to, addiction, compulsive and excessive use,
26 dissociative behavior, social isolation, and an array of mental health disorders like body
27 _____
28 critics-say-encouraged-reckless-driving.

1 dysmorphia, anxiety, depression, and insomnia.

2 552. Snap targets adolescent users via advertising and marketing materials distributed via
3 digital and traditional media, including expensive advertisements placed during high-profile
4 sporting events. Snap fails to warn the targets of these ads—often minors—about the physical and
5 mental risks associated with using Snapchat.

6 553. Snap further fails to warn adolescent users during the platform registration process.
7 At account setup, Snap’s platform contains no warning labels, banners, or conspicuous messaging
8 to adequately inform adolescent users of the known risks and potential physical and mental harms
9 associated with usage of its platform. Instead, Snap allows adolescent users to easily create an
10 account (or multiple accounts) and fully access the platform.

11 554. Snap’s lack of adequate warnings continues after an adolescent has the Snapchat
12 platform. Snap does not adequately inform adolescent users that their data will be tracked, used to
13 help build a unique algorithmic profile, and potentially sold to Snap’s advertising clients, who will
14 in turn use the data to target and profile the user.

15 555. Alarmingly, Snap also does not warn adolescent users before facilitating adult
16 connections and interactions that adult predators use its platform. It also fails to instruct adolescent
17 users on ways to avoid unknown adults on Snap.

18 556. Snap also fails to warn adolescent users who exhibit problematic signs of addiction
19 or are habitually and compulsively accessing the app. Instead, Snap utilizes push notifications to
20 encourage engagement with Snapchat.

21 557. In addition, despite proactively providing adolescent users with countless filtering
22 and editing tools, Snap does not warn its adolescent users regarding the mental health harms
23 associated with those heavily filtered images.

24 558. As recently as January 2024, Snap introduced “expanded Family Center features to
25 give parents more visibility and further empower them to have productive conversations about
26 online safety.”⁷⁴³

27
28 ⁷⁴³ *Expanding Our In-App Parental Tools*, Snap (Jan. 11, 2024),
(footnote continued)

1 559. Tools implemented in 2024 will not remedy prior harms suffered or damages
2 incurred by NYC Plaintiffs. The efficacy of these tools is also questionable. Snap’s recently
3 implemented tools do not include changes to Snapchat’s use of algorithms or other intermittent
4 variable rewards that manipulate young users to spend as much time on Snapchat as possible.
5 Providing optional tools to parents, and putting the burden on them to address the problems
6 caused by Snapchat’s own design features, will not solve the problem.

7 560. Snap’s failure to properly warn and instruct adolescent users or their parents has
8 proximately caused significant harm to NYC Plaintiffs, who have expended and continue to
9 expend significant resources addressing the impact of Snap’s conduct on NYC Plaintiffs’
10 operations, including providing additional support to impacted youth.

11 **D. FACTUAL ALLEGATIONS AS TO TIKTOK AND BYTEDANCE**

12 **1. Background and overview of TikTok.**

13 561. In 2012, Beijing-based technologist Zhang Yiming paired up with American venture
14 capitalist Matt Huang to launch ByteDance, and its first platform Jinri Toutiao (“Today’s
15 Headlines”), which utilized A.I. to gather and present world news to users on a single feed.

16 562. Following the success of its first platform, ByteDance created Douyin in 2016, a
17 music-based app loosely modeled on the popular app Musical.ly. Musical.ly was a hit in the U.S.,
18 as American teens gravitated to the platform, which allowed users, including minor users, to
19 create 15-second videos of themselves lip-syncing, dancing, etc. to popular songs and movie
20 scenes, and then post them to a scrollable feed for other users to see.

21 563. In 2017, ByteDance launched TikTok, a version of Douyin for the non-Chinese
22 market, and acquired Musical.ly—which, by then, boasted a user base of almost 60 million
23 monthly active users—for \$1 billion. Nine months later, ByteDance merged its newly acquired
24 app into its existing platform, and a global version of TikTok was born.

25 564. ByteDance’s design of TikTok predecessor Douyin is profoundly different than
26 TikTok. Douyin serves its Chinese users educational and patriotic material and limits young

27 _____
28 <https://values.snap.com/news/expanding-our-in-app-parental-tools-2024>.

1 people 14-and-under to just 40 minutes per day.⁷⁴⁴ TikTok, however, is designed to encourage
2 addictive and compulsive use and, until recently, had no usage limits for minor users. TikTok’s
3 American algorithm is instead design to addict its users and keep them on the platform for as long
4 as possible, despite knowing the harm that can result.

5 565. ByteDance operates TikTok for profit, which creates advertising revenue through
6 maximizing the amount of time users spend on the platform and their level of engagement. The
7 greater the amount of time that young users spend on TikTok, the greater the advertising revenue
8 TikTok earns.

9 566. TikTok Inc. captures vast swaths of information from its users, both on and off the
10 TikTok platform, including Internet and other network activity information—such as location data
11 and browsing and search histories. ByteDance Ltd. exclusively controls and operates the TikTok
12 platform. In his recent testimony before the House Energy and Commerce Committee, TikTok
13 CEO Shou Chew admitted that he reports directly to ByteDance Ltd. CEO Liang Rubo.
14 ByteDance Ltd. admits that its personnel outside the United States can access information from
15 American TikTok users including public videos and comments. On information and belief,
16 ByteDance Ltd. also has access to United States TikTok users’ private information.

17 567. Despite efforts to portray TikTok as separate from Douyin (the Chinese version of
18 TikTok), the two companies share many overlapping personnel and technologies, as the recent
19 report “TikTok, ByteDance and Their Ties to the Chinese Communist Party,” produced by the
20 Australian Senate Select Committee on Foreign Interference Through Social Media, makes clear.
21 TikTok’s engineering manager works on both TikTok and Douyin, and TikTok Inc.’s
22 development processes are closely intertwined with Douyin’s processes. TikTok Inc.’s employees
23 and data systems are also deeply interwoven into Byte Dance Ltd.’s ecosystem.

24 568. Indeed, TikTok’s algorithm was created by ByteDance Ltd. and contains some of the
25

26 ⁷⁴⁴ Sapna Maheshwari, *Young TikTok Users Quickly Encounter Problematic Posts, Researchers Say*,
27 N.Y. Times (Dec. 14, 2022), [https://www.nytimes.com/2022/12/14/business/tiktok-safety-teens-
28 eating-disorders-self-harm.html](https://www.nytimes.com/2022/12/14/business/tiktok-safety-teens-eating-disorders-self-harm.html) [<https://perma.cc/VT8S-HZGM>].

1 same underlying basic technology as Douyin.⁷⁴⁵

2 569. TikTok's algorithm still belongs to ByteDance Ltd., which declined to sell the
3 technology to a U.S. company.⁷⁴⁶

4 570. ByteDance Ltd. also plays a role in hiring key personnel at TikTok.⁷⁴⁷

5 571. High-level ByteDance Ltd. Employees served in dual roles for both ByteDance Ltd.
6 And TikTok Inc. at least as recently as 2021. These employees include: (1) Vanessa Pappas, the
7 Head of TikTok Inc. and interim head of the global TikTok business for ByteDance Ltd.; (2)
8 Roland Cloutier, former Global Chief Security Officer, who provided cyber risk and data security
9 support for both TikTok Inc. and ByteDance Ltd.; and (3) Shou Zi Chew, TikTok's CEO and CFO
10 of ByteDance Ltd., who reports to the CEO of ByteDance.⁷⁴⁸

11 572. In addition to showing that ByteDance Ltd. is highly integrated with TikTok Inc., the
12 Australian Senate Report notes that ByteDance Ltd. is heavily influenced by the Chinese
13 Communist Party. The report notes ByteDance Ltd.'s Editor in Chief, Zhang Fuping, is a Chinese
14 Communist Party Secretary. The Australian Senate report concludes that ByteDance Ltd. is a
15 hybrid state-private entity at least partially controlled by the Chinese government.

16 573. ByteDance Ltd. designed and operates the Lark communication platform for use by
17 all its subsidiaries, including ByteDance and TikTok. All ByteDance Ltd., ByteDance, and
18 TikTok, personnel have a Lark account and accompanying profile. All oral, video, and written
19

20 ⁷⁴⁵ Letter from Shou Zi Chew, CEO, TikTok to Marsha Blackburn, U.S. Senator *et al.* at 4 (June 30,
2022), <https://www.documentcloud.org/documents/22126313-tiktok-letter-to-senators>.

21 ⁷⁴⁶ Zhou Xin & Tracy Qu, *TikTok algorithm not for sale, source says; As tomorrow's US divestment*
22 *deadline looms, a person familiar with the discussions at ByteDance says company's source code*
23 *will not be available*, S. China Morning Post (Sept. 14, 2020),
[https://www.scmp.com/economy/china-economy/article/3101362/tiktoks-algorithm-not-sale-](https://www.scmp.com/economy/china-economy/article/3101362/tiktoks-algorithm-not-sale-bytedance-tells-us-source)
24 [bytedance-tells-us-source](https://www.scmp.com/economy/china-economy/article/3101362/tiktoks-algorithm-not-sale-bytedance-tells-us-source) [<https://perma.cc/9EPY-C5F2>].

25 ⁷⁴⁷ Letter from Shou Zi Chew, CEO, TikTok to Marsha Blackburn, U.S. Senator *et al.* at 5 (June 30,
2022), <https://www.documentcloud.org/documents/22126313-tiktok-letter-to-senators>.

26 ⁷⁴⁸ *See TikTok Names CEO and COO*, TikTok Inc. (Apr. 30, 2021), [https://newsroom.tiktok.com/en-](https://newsroom.tiktok.com/en-us/tiktok-names-ceo-and-coo)
27 [us/tiktok-names-ceo-and-coo](https://newsroom.tiktok.com/en-us/tiktok-names-ceo-and-coo); Ryan Mac & Chang Che, *TikTok's C.E.O. Navigates the Limits of His*
28 *Power*, N.Y. Times (Sept. 16, 2020), [https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-](https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html)
[shou-zi-chew.html](https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html) [<https://perma.cc/YG4N-HP6P>].

1 communications between ByteDance Ltd., ByteDance, and TikTok employees are either
2 conducted face-to-face or through Lark. All written communications or documents exchanged
3 through Lark are stored on Lark’s database. Lark also provides real-time translation subtitling for
4 oral and video communications between English-speaking and Chinese-speaking personnel.
5 Transcripts of these translated oral and video conversations are stored on Lark’s database.

6 574. Other public reports demonstrate that multiple former TikTok employees have
7 reported ByteDance Ltd. exercises significant control over TikTok’s decision-making and
8 operations. Twelve former TikTok and ByteDance Ltd. Employees and executives reported that
9 CEO Shou Zi Chew has “limited” decision-making power.⁷⁴⁹ Instead, major decisions related to
10 TikTok are made by ByteDance Ltd. Founder Zhang Yiming and other ByteDance Ltd. officials
11 in China.⁷⁵⁰

12 575. Senior TikTok employees hired to head departments have left the company after
13 learning they would not be able to significantly influence decision-making.⁷⁵¹

14 576. ByteDance Ltd.’s own Internal Audit team prepared a risk assessment in late 2021
15 and found that numerous senior employees felt “that themselves and their teams are just
16 ‘figureheads’ or ‘powerless ombudsmen’ who are functionally subjection to the control of
17 [China]-based teams.”⁷⁵²

18 577. As most recent as 2022, employees that work on product, engineering, and strategy
19 at TikTok said they reported directly to ByteDance leadership in China, bypassing TikTok’s

20 ⁷⁴⁹ Ryan Mac & Chang Che, *TikTok’s C.E.O. Navigates the Limits of His Power*, N.Y. Times (Sept.
21 16, 2020), <https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html>
22 [<https://perma.cc/YG4N-HP6P>].

23 ⁷⁵⁰ *Id.*

24 ⁷⁵¹ Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-*
25 *Employees Say*, Forbes (Sept. 21, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
26 [white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
27 [<https://perma.cc/SK33-HJ4S>].

28 ⁷⁵² Emily Baker-White, *A China-Based ByteDance Team Investigated TikTok’s Global Security*
Chief, Who Oversaw U.S. Data Concerns, Forbes (Oct. 25, 2022),
[https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-](https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-cloutier/?sh=3dda7fa26640)
[chief-security-officer-roland-cloutier/?sh=3dda7fa26640](https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-cloutier/?sh=3dda7fa26640) [<https://perma.cc/9VYV-X65J>].

1 executive suite.⁷⁵³ Similarly, former TikTok employees have stated that “nearly 100% of TikTok’s
2 product development is led by Chinese ByteDance employees.”⁷⁵⁴

3 578. Other employees have described ByteDance Ltd. as being “heavily involved” in
4 decision-making and operations at TikTok, with “blurry” boundaries between the two
5 companies.⁷⁵⁵ According to employees, these blurred lines included U.S.-based employees
6 working during Chinese business hours to answer their ByteDance Ltd. counterparts’ questions.⁷⁵⁶
7 Further, one TikTok employee stated ByteDance Ltd. employees could access U.S. user data.⁷⁵⁷

8 579. Statements from other TikTok employees suggest the lines between the TikTok and
9 ByteDance Ltd. are almost nonexistent, with ByteDance Ltd. being the “central hub for pretty
10 much everything . . . Beijing managers sign off on major decisions involving U.S. operations,
11 including from the teams responsible for protecting Americans’ data and deciding which videos
12 should be removed.”⁷⁵⁸ Further, TikTok employees stated ByteDance Ltd. officials “lead
13 TikTok’s design and engineering teams and oversee the software that U.S. employees use to chat
14 with colleagues and manage their work. They’re even the final decision-makers on human
15 resources matters, such as whether an American employee can work remotely.”⁷⁵⁹ ByteDance
16
17

18 ⁷⁵³ Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-*
19 *Employees Say*, *Forbes* (Sept. 21, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
20 [white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
[<https://perma.cc/SK33-HJ4S>].

21 ⁷⁵⁴ Salvador Rodriguez, *TikTok insiders say social media company is tightly controlled by Chinese*
22 *parent ByteDance*, *CNBC* (June 25, 2021), [https://www.cnbc.com/2021/06/25/tiktok-insiders-say-](https://www.cnbc.com/2021/06/25/tiktok-insiders-say-chinese-parent-bytedance-in-control.html)
[chinese-parent-bytedance-in-control.html](https://www.cnbc.com/2021/06/25/tiktok-insiders-say-chinese-parent-bytedance-in-control.html).

23 ⁷⁵⁵ *Id.*

24 ⁷⁵⁶ *Id.*

25 ⁷⁵⁷ *Id.*

26 ⁷⁵⁸ Drew Harwell & Elizabeth Dwoskin, *As Washington Wavers on TikTok, Beijing Exerts Control*,
27 *Wash. Post* (Oct. 30, 2022),
<https://www.washingtonpost.com/technology/interactive/2022/bytedance-tiktok-privacy-china/>
28 [<https://perma.cc/4GBZ-6XZJ>].

⁷⁵⁹ *Id.*

1 continues to make decisions “both large and small” about all aspects of TikTok.⁷⁶⁰ It directs
2 TikTok’s budget, operates TikTok’s internal document storage platform, and handles media
3 criticism directed at TikTok, as well as enters into contracts on behalf of TikTok to provide key
4 services for the TikTok platform.⁷⁶¹ In addition, the source code that still makes up TikTok’s
5 recommendation algorithm was originally written by ByteDance employees in China.⁷⁶²

6 580. One former TikTok employee reported to *Forbes* that their paycheck listed
7 ByteDance as the check’s drawer, not TikTok.⁷⁶³ And another employee reported their contract
8 listed TikTok as their employer, but their tax returns listed ByteDance.⁷⁶⁴

9 581. Since its launch, TikTok has grown exponentially. In late 2021, its owner and creator
10 ByteDance publicly stated that TikTok had 1 billion active global users, up from 55 million in
11 early 2018 and 700 million in mid-2020.⁷⁶⁵ TikTok CEO Shou Chew recently testified that the app
12 currently has over 150 million monthly active users in the United States.⁷⁶⁶

13 582. A large portion of TikTok’s user base is comprised of American children. In July
14 2020, TikTok reported that more than one-third of its 49 million daily users in the United States
15 were 14 or younger.⁷⁶⁷ Internal documents reveal that TikTok’s success among U.S. users under
16

17 ⁷⁶⁰ Utah AG Compl. at 53, ¶ 145.

18 ⁷⁶¹ *Id.* at 53, ¶¶ 145–147.

19 ⁷⁶² *Id.* at 53–54, ¶ 148.

20 ⁷⁶³ Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-*
21 *Employees Say*, *Forbes* (Sept. 21, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
22 [white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707](https://perma.cc/SK33-HJ4S)
[<https://perma.cc/SK33-HJ4S>].

23 ⁷⁶⁴ *Id.*

24 ⁷⁶⁵ Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, *CNBC* (Sept. 27,
25 2021), <https://www.cnbc.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html>.

26 ⁷⁶⁶ *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children From*
27 *Online Harms: Hearing Before the H. Comm. on Energy & Com.*, 118th Cong. 1 (2023) (written
28 testimony of Shou Chew, CEO, TikTok Inc.),
[https://d1dth6e84htgma.cloudfront.net/Written_Testimony_of_Shou_Chew_c07504eccf_084e8683f](https://d1dth6e84htgma.cloudfront.net/Written_Testimony_of_Shou_Chew_c07504eccf_084e8683f3.pdf?updated_at=2023-03-22T03:10:22.760Z)
3.pdf?updated_at=2023-03-22T03:10:22.760Z.

⁷⁶⁷ Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under, Raising*
Safety Questions, *N.Y. Times* (Sept. 17, 2020),
(footnote continued)

1 the age of 18 has been incredibly successful—reaching a market penetration of 95%.⁷⁶⁸ A 2022
2 Pew Research Center survey reported that 67% of American teenagers (age 13–17) use TikTok,
3 and that number rose dramatically when Black (81%) and Hispanic (71%) teens were surveyed.
4 Overall, most American teenagers (58%) reported using the platform daily, with 16% saying they
5 use the platform “almost constantly.”⁷⁶⁹ In another recent report, more than 13% of young users
6 declared they “wouldn’t want to live without” TikTok.⁷⁷⁰

7 583. Internal documents reveal that U.S. children average nearly two hours a day on the
8 TikTok platform, with many spending more than four hours a day on TikTok alone.⁷⁷¹ Of the
9 nearly seventy million youth aged 13–17 who use TikTok daily, almost thirty million of them are
10 spending close to two or more hours on the platform every day and seventeen million are spending
11 nearly three or more hours on the TikTok platform every day.⁷⁷² To put that into perspective,
12 almost a quarter of all children using the TikTok platform are spending the equivalent of half of
13 their school day on the platform every day.⁷⁷³

14 584. TikTok’s capture of the American youth market is no accident, but instead the result
15 of a carefully executed campaign. Early on, Alex Zhu, one of TikTok’s creators, recognized that
16 “[t]eenagers in the U.S. [were] a golden audience” for this emerging social media platform.⁷⁷⁴ To
17

18 [https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-](https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html#:~:text=The%20TikTok%20data%20seen%20by,as%20being%20of%20unknown%20age)
19 [ftc.html#:~:text=The%20TikTok%20data%20seen%20by,as%20being%20of%20unknown%20age](https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html#:~:text=The%20TikTok%20data%20seen%20by,as%20being%20of%20unknown%20age)
[<https://perma.cc/PQR5-GSRJ>].

20 ⁷⁶⁸ Utah AG Compl. at 10, ¶ 26.

21 ⁷⁶⁹ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

22 ⁷⁷⁰ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31,
23 Common Sense Media (2022),
24 [https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)
[report-final-web_0.pdf](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf).

25 ⁷⁷¹ Utah AG Compl. at 17, ¶ 49.

26 ⁷⁷² *Id.*

27 ⁷⁷³ *Id.*

28 ⁷⁷⁴ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.
Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet->
(footnote continued)

1 cash in on this gold, ByteDance implemented a series of platform features designed to attract and
2 addict young users. As Zhu explained in 2019, “[e]ven if you have tens of millions of users, you
3 have to keep them always engaged[.]”⁷⁷⁵ This engagement has come at the cost of young users’
4 health and significant impact to school districts charged with educating those youth in a safe and
5 healthy environment.

6 **2. ByteDance intentionally encourages youth to use its platform and then leverages**
7 **that use to increase revenue.**

8 585. ByteDance has designed and aggressively marketed TikTok, the harmful and
9 addictive version of Douyin, to attract and profit from young Americans.

10 586. Like the other Defendants’ platforms, TikTok depends on advertising revenue,
11 which has boomed. TikTok was projected to receive \$11 billion in advertising revenue in 2022,
12 over half of which is expected to come from the United States.⁷⁷⁶

13 587. The initial iteration of TikTok allowed users to lip sync pop music by celebrities
14 who appealed primarily to teens and tweens (e.g., Selena Gomez and Ariana Grande). It labeled
15 folders with names attractive to youth (e.g., “Disney” and “school”); and included in those folders
16 songs such as “Can You Feel the Love Tonight” from the movie “The Lion King,” “You’ve Got a
17 Friend in Me” from the movie “Toy Story,” and other renditions covering school-related subjects
18 or school-themed television shows and movies.⁷⁷⁷

19 588. ByteDance also specifically and intentionally excluded videos that would not appeal

20 _____
21 companies-rest-of-the-
22 world.html#:~:text=For%20Chinese%20web%20start%2Dup,the%20rest%20of%20the%20globe
[https://perma.cc/UR2Q-KEF7].

23 ⁷⁷⁵ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve*
24 *probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5#:~:text=%22I%20think%20we%20have%20these,nov%20we%20can%20lay%20back.%22>.

25 ⁷⁷⁶ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters
26 (Apr. 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.

27 ⁷⁷⁷ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 8, ¶¶ 26–27,
28 *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

1 to young Americans, instructing TikTok moderators that videos of people with “too many
2 wrinkles” should not be permitted on users’ “For You” pages because such posts were “much less
3 attractive [and] not worth[] . . . recommend[ing][.]”⁷⁷⁸

4 589. Even TikTok’s sign-up process demonstrates that young users are what ByteDance
5 values most. In 2016, the birthdate for those signing up for the app defaulted to the year 2000 (i.e.,
6 16 years old).⁷⁷⁹In December 2016, Zhu confirmed the company had actual knowledge that “a lot
7 of users, especially top users, they are under 13.”⁷⁸⁰

8 590. The FTC alleged that despite the company’s knowledge of these and a “significant
9 percentage” of other users who were under 13, the company failed to comply with the COPPA.⁷⁸¹

10 591. TikTok settled those claims in 2019 by agreeing to pay what was then the largest
11 ever civil penalty under COPPA and to several forms of injunctive relief.⁷⁸²

12 592. In an attempt to come into compliance with the consent decree and COPPA, TikTok
13 made available to users under 13 what it describes as a “limited, separate app experience.”⁷⁸³ The
14 child version of TikTok restricts users from posting videos through the app. Children can still,
15

16 ⁷⁷⁸ Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly”*
17 *People and the Poor to Attract New Users*, Intercept_ (Mar. 16, 2020),
18 <https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>.

19 ⁷⁷⁹ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed*
20 *with*, Bus. Insider (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.

21 ⁷⁸⁰ Jon Russell, *Musical.ly defends its handling of young users, as it races past 40M MAUs*,
22 TechCrunch (Dec. 6, 2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>; *see also* TechCrunch, *From Brush to Canvas with Alex Zhu of Musical.ly* at 8:58–11:12,
YouTube (Dec. 6, 2016), <https://www.youtube.com/watch?v=ey15v81pwII>.

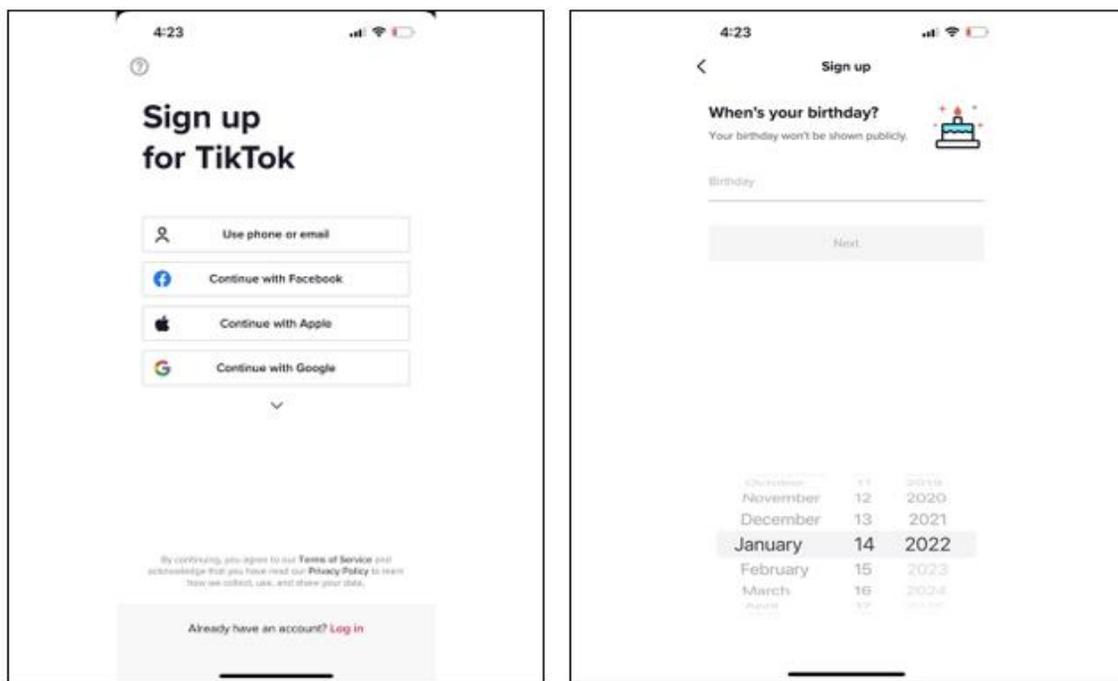
23 ⁷⁸¹ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 6, ¶¶ 13–15,
24 *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

25 ⁷⁸² Lesley Fair, *Largest FTC COPPA settlement requires Musical.ly to change its tune*, FTC (Feb.
26 27, 2019), <https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune>.

27 ⁷⁸³ Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge (Feb. 27,
28 2019), <https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law>.

1 however, record and watch videos on TikTok.⁷⁸⁴ For that reason, experts fear the app is “designed
2 to fuel [kids’] interest in the grown-up version.”⁷⁸⁵

3 593. These subtle and obvious ways TikTok markets to and obtained a young userbase are
4 manifestations of Zhu’s views about the importance of user engagement to growing TikTok. Zhu
5 explained the target demographic to *The New York Times*: “[T]eenage culture doesn’t exist” in
6 China because “teens are super busy in school studying for tests, so they don’t have the time and
7 luxury to play social media apps.”⁷⁸⁶ By contrast, Zhu describes “[t]eenagers in the U.S. [as] a
8 golden audience.”⁷⁸⁷



23 ⁷⁸⁴ *Id.*

24 ⁷⁸⁵ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),
25 <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

26 ⁷⁸⁶ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.
27 Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html> [<https://perma.cc/UR2Q-KEF7>].

28 ⁷⁸⁷ *Id.*

1 **3. ByteDance intentionally designed platform features to addict children and**
2 **adolescents.**

3 594. TikTok’s growth among young Americans has been further enabled by its ineffective
4 age verification and parental control procedures, which allow children under 13 unfettered access
5 to the platform, without regard to parental consent, despite the fact that TikTok’s terms of service
6 require consent of parents or guardians for minors.

7 **a. TikTok’s age-verification measures are dangerously deficient.**

8 595. When a user first opens TikTok, they are prompted to “Login in to TikTok” or “Sign
9 up” for an account using a phone number or email address. TikTok then asks, “When’s your
10 birthday?”

11 596. ByteDance does not verify the age that TikTok users report. Nor does it use any
12 method to verify that users who acknowledge they are minors have the consent of their parents or
13 legal guardians to use the platform. In fact, at least as of 2020, TikTok still had not developed a
14 company position on age verification.⁷⁸⁸

15 597. ByteDance allows users to utilize TikTok without creating an account, to circumvent
16 age restrictions. Indeed, TikTok allows users, no matter what age, to “browse as [a] guest,” and
17 watch TikTok’s “For You” page, while TikTok’s algorithm collects data about that user and their
18 viewing behavior.⁷⁸⁹

19 598. ByteDance knows that many U.S. TikTok users under the age of 13 fail to report
20 their birth dates accurately.⁷⁹⁰ In July 2020, TikTok reported that more than a third of its 49
21 million daily users in the United States were 14 years old or younger. While some of those users
22 were 13 or 14, at least one former employee reported that TikTok had actual knowledge of

23 ⁷⁸⁸ TIKTOK3047MDL-001-00060941 at *85 (“Minor Safety Policy & PnP,” PowerPoint, January
24 2021).

25 ⁷⁸⁹ *Browse as guest*, TikTok Inc., <https://support.tiktok.com/en/log-in-troubleshoot/log-in/browse-as-guest> (last visited Feb. 12, 2024).

26 ⁷⁹⁰ Jon Russell, *Musical.ly defends its handling of young users, as it races past 40M MAUs*,
27 TechCrunch (Dec. 6, 2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>.

1 children even younger based on videos posted on the TikTok platform—yet failed to promptly
2 take down those videos or close those accounts.⁷⁹¹

3 599. ByteDance’s Trust and Safety team recognizes that one of the biggest challenges it
4 faces is “determining who is a minor (defined as users 13–17 years old).”⁷⁹²

5 600. In 2019, the FTC acted on this admission and alleged that ByteDance failed to
6 comply with COPPA.⁷⁹³

7 601. TikTok settled the FTC claims, agreeing to a then-record civil COPPA penalty and
8 several forms of injunctive relief intended to protect children who use the platform.⁷⁹⁴

9 602. To comply with the terms of that settlement, ByteDance created “TikTok for
10 Younger Users,” a “limited app experience” for users under the age of 13.⁷⁹⁵ “TikTok for Younger
11 Users” does not permit users to “share their videos, comment on others’ videos, message with
12 users, or maintain a profile or followers.”⁷⁹⁶ However, users can still “experience what TikTok is
13 at its core” by recording and watching videos on TikTok. For that reason, experts state the app is
14 “designed to fuel [kids’] interest in the grown-up version.”⁷⁹⁷

15 603. Moreover, users under 13 can easily delete their age-restricted accounts and sign up
16

17 ⁷⁹¹ Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under, Raising*
18 *Safety Questions*, N.Y. Times (Sept. 17, 2020),
19 <https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html>
[<https://perma.cc/PQR5-GSRJ>].

20 ⁷⁹² TIKTOK3047MDL-001-00060811 at *16.

21 ⁷⁹³ See Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 9–10, ¶¶
22 30–32, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No.
1.

23 ⁷⁹⁴ Natasha Singer, *TikTok Broke Privacy Promises, Children’s Groups Say*, N.Y. Times (May 14,
24 2020), <https://www.nytimes.com/2020/05/14/technology/tiktok-kids-privacy.html> [<https://perma.cc/S5Q9-ERWP>].

25 ⁷⁹⁵ *TikTok for Younger Users*, TikTok Inc. (Dec. 13, 2019), <https://newsroom.tiktok.com/en-us/tiktok-for-younger-users>.

26 ⁷⁹⁶ *Id.*

27 ⁷⁹⁷ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),
28 <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->

1 for an over-13 account on the same mobile device—without any restriction or verification—by
2 simply inputting a fake birthdate. Representative Ann Kuster raised this issue with TikTok CEO
3 Shou Chew in his March 23, 2023 congressional testimony.⁷⁹⁸ Ms. Kuster indicated that her staff
4 was able to impersonate a minor and create a different account with a more advanced age by
5 merely deleting one and creating another.⁷⁹⁹ The staff members did not even need to switch
6 emails. Chew promised to “look at [this].”⁸⁰⁰

7 604. The absence of effective age verification measures also means that adult users claim
8 to be children—with obvious dangers to the children on ByteDance’s platform.

9 **b. TikTok’s parental controls are dangerously deficient.**

10 605. In April 2020, following the FTC settlement, ByteDance created a “Family Pairing”
11 feature on TikTok. The supposed purpose of that feature was to allow parents to link their
12 accounts to their children’s accounts and enforce certain controls (such as screen time limits and
13 restriction of “content that may not be appropriate for all audiences”).⁸⁰¹

14 606. “Family Pairing” is supposed to allow parents to prevent their children from direct
15 messaging other TikTok users. But ByteDance has designed TikTok’s “Family Pairing” feature so
16 that it is not mandatory for minor users. To use it, a parent or guardian must create their own
17 TikTok account to pair it with their child’s account. Further, the “Family Pairing” feature is
18 available only on the TikTok mobile app. It provides no protection when a child accesses TikTok
19 through a web browser. Because this feature requires parents to know the name of their child’s
20 account to pair it, youth can easily evade the protections of the “Family Pairing” feature by
21 creating anonymous accounts, again without parental approval or knowledge.

22
23 ⁷⁹⁸ *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children From*
24 *Online Harms: Hearing Before the H. Comm. on Energy & Com.*, 118th Cong. (2023),
[https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-](https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms)
25 [safeguard-american-data-privacy-and-protect-children-from-online-harms.](https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms)

26 ⁷⁹⁹ *Id.*

27 ⁸⁰⁰ *Id.*

28 ⁸⁰¹ Jeff Collins, *TikTok introduces Family Pairing*, TikTok Inc. (Apr. 15, 2020),
[https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing.](https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing)

1 607. ByteDance further stymies parents’ ability to supervise minor childrens’ use of
2 TikTok by permitting minor users to block their parents’ profiles, post ephemeral videos called
3 “Stories” that disappear after 24 hours, and post those Stories to “Friends Only.”

4 608. ByteDance could, but does not, adopt safety features that notify parents when minors
5 are engaging excessively with the platform and are using it during sleeping hours. The company is
6 aware that many youth are using the platform late at night and admits that such use is a “strong
7 indicator” that those users are not getting the recommended eight hours of sleep necessary for
8 their health and well-being.⁸⁰² Internal TikTok documents reveal that more than 20% of children
9 are active on its platform between 12:00 a.m. and 5:00 a.m., when they should be sleeping.⁸⁰³
10 Specifically, 19% of TikTok’s 13 to 15-year-old users globally and 25% of users aged 16–17 are
11 active on TikTok between 12:00 a.m. and 5:00 a.m.⁸⁰⁴ Nevertheless, until August 2021,
12 ByteDance would send push notifications to young users at all hours of the day or night to
13 persuade them to log back on to TikTok. Since then, push notifications have been cut off at 9 pm
14 for users self-identified as 13–15 years old, and after 10 pm for users self-identified as 16 or 17
15 years of age.

16 609. Until January 13, 2021, ByteDance interfered with parental supervision and
17 endangered children by defaulting all accounts, including those registered to children as young as
18 13, to “public.” That allowed strangers to contact minor users regardless of age or location.
19 ByteDance also intentionally and actively promoted these types of connections by suggesting
20 accounts to follow through the “Find Friends” or “People You May Know” features.

21 610. For users self-identified as age 16 and over, ByteDance still set the default privacy
22 setting for all registered accounts to “public,” meaning that anyone could view a user’s profile, on
23 or off TikTok, request the user as a friend, or engage with the user’s videos.

24
25
26 ⁸⁰² Utah AG Compl. at 16, ¶ 42.

27 ⁸⁰³ *Id.* at 3, ¶ 5.

28 ⁸⁰⁴ *Id.* at 16, ¶ 42.

1 c. **ByteDance intentionally designed TikTok’s features and algorithms to**
2 **maximize engagement using an endless feed, time-limited experiences,**
3 **intermittent variable rewards, reciprocity, and ephemeral content.**

4 611. Like each of the other Defendants, ByteDance has designed and coded TikTok with
5 features that foster addictive and compulsive use by youth, leading to a cascade of mental and
6 physical injuries.

7 612. One of TikTok’s defining features is its “For You” page (or “FYP”). According to
8 ByteDance, it is “central to the TikTok experience and where most of our users spend their
9 time.”⁸⁰⁵

10 613. TikTok’s FYP uses ByteDance’s powerful machine-learning algorithms to to
11 maximize user engagement and thereby serve ByteDance’s interests—as opposed to simply
12 responding to searches by users. As one industry commentator explained, TikTok uses “a
13 machine-learning system that analyzes each video and tracks user behavior so that it can serve up
14 a continually refined, never-ending stream of TikToks optimized to hold [users’] attention.”⁸⁰⁶As
15 another commentator put it, “you don’t tell TikTok what you want to see. It tells you.”⁸⁰⁷

16 614. Zhu has remarked that “[e]ven if you have tens of millions of users, you have to keep
17 them always engaged[.]”⁸⁰⁸ Thus, according to Zhu, TikTok’s algorithms are “focused primarily
18 on increasing the engagement of existing users.”⁸⁰⁹

19 ⁸⁰⁵ *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
20 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

21 ⁸⁰⁶ Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),
22 <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>
23 [<https://perma.cc/A3XU-Y73L>].

24 ⁸⁰⁷ Drew Harwell, *How TikTok Ate the Internet*, Wash. Post. (Oct. 14, 2022),
25 <https://www.washingtonpost.com/technology/interactive/2022/tiktok-popularity/>
26 [<https://perma.cc/R7JJ-CDSF>].

27 ⁸⁰⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve*
28 *probably never heard of*, Bus. Insider (May 28, 2016), [https://www.businessinsider.com/what-is-](https://www.businessinsider.com/what-is-musically-2016-5)
[musically-2016-5](https://www.businessinsider.com/what-is-musically-2016-5).

⁸⁰⁹ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and*
Teen Markets, Inc. (June 2, 2016), [https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html)
[network-quickly-capturing-the-tween-and-teen-m.html](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html).

1 615. TikTok’s internal documents make clear that habit formation is a core “mission” of
2 the company:

3 Pulling in and retaining new-users is difficult because it is causing these users to
4 make behavioral changes to their current habits. The Habit Loop (neurological loop
5 that governs habits) is broken down into 3 stages: the Cue[,] the Routine, the Reward.
6 Prior to downloading TikTok, new-users already established “Routines” for cues
7 (ex[ample] boredom, free-time, bed-time routine) that we may want as cue[s] to bring
8 people onto TikTok. However, changing someone’s routine is not as simple as asking
9 them to. It’s about the reward; the positive reinforcement and benefit that the person
10 feels from doing that routine. TikTok[’]s mission to increase retention is to discover
11 what “rewards” our users are seeking during the cues we want to associate ourselves
12 with.⁸¹⁰

13 616. An internal document: *TikTok Algo 101*, which TikTok has confirmed is authentic,
14 “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily active users,
15 it has chosen to optimize for two closely related metrics in the stream of videos it serves:
16 ‘retention’—that is, whether a user comes back—and ‘time spent.’”⁸¹¹

17 617. “This system means that watch time is key[,]” explained Guillaume Chaslot, the
18 founder of Algo Transparency.⁸¹² Chaslot noted that “rather than giving [people] what they really
19 want,” TikTok’s “algorithm tries to get people addicted[.]”⁸¹³

20 618. To fulfill this goal, the TikTok algorithm responds to a user’s time spent watching
21 and engaging with a video by feeding them similar videos.⁸¹⁴ As TikTok describes it, the
22 algorithms populate each user’s FYP feed by “ranking videos based on a combination of factors”
23 that include, among others, any interests expressed when a user registers a new account, videos a
24 user likes, accounts they follow, hashtags, captions, sounds in a video they watch, certain device

25 ⁸¹⁰ Utah AG Compl. at 11–12, ¶ 31.

26 ⁸¹¹ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),
27 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html> [<https://perma.cc/J3L5-35CL>].

28 ⁸¹² *Id.*

⁸¹³ *Id.*

⁸¹⁴ Kaitlyn Tiffany, *I’m Scared of the Person TikTok Thinks I Am*, Atl. (June 21, 2021),
<https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/>
[<https://perma.cc/5T3M-88ZY>].

1 settings, such as their language preferences and where they are located, and finally, the likelihood
2 of the user’s interest.⁸¹⁵

3 619. ByteDance has designed TikTok’s algorithm so that certain factors, such as time
4 spent watching a video, are more important to the algorithm than others. For example, TikTok
5 explained that “whether a user finishes watching a longer video from beginning to end, would
6 receive greater weight than . . . whether the video’s viewer and creator are both in the same
7 country.”⁸¹⁶

8 620. TikTok’s design features are therefore designed to give young users immediate
9 gratification and boost rewards to encourage excessive, “routine use” of the platform.⁸¹⁷ TikTok
10 acknowledges it “utilizes many coercive design tactics that detract from user agency such as
11 infinite scroll, constant notifications, and the ‘slot machine’ effect.”⁸¹⁸

12 621. TikTok knows that its presence in people’s lives monopolizes their time. For
13 example, an internal TikTok Powerpoint: *TikTok Strategy: 2021 Positioning*, shows its awareness
14 of the addictive nature of its platform, noting that Tiktok is “in most people’s lives like this: ‘go on
15 tiktok for 5 mins and 3 hours have passed’. . . [o]r even this: ‘my night routine: - watch 3 hours
16 worth of tiktok videos[;] - try to follow the dance steps[;] - realise u suck at dancing n cry about
17 it[;] - continue watching tiktok videos[;] - sleep.”⁸¹⁹ At its core, TikTok’s success can largely be

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20 ⁸¹⁵ *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
21 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>; see also *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
22 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

23 ⁸¹⁶ *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
24 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>; see also *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
25 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

26 ⁸¹⁷ Utah AG Compl. at 12, ¶ 32.

27 ⁸¹⁸ *Id.* at 14, ¶ 37.

28 ⁸¹⁹ *Id.* at 12–13, ¶ 32.

1 attributed to design features “which limits user agency.”⁸²⁰

2 622. TikTok’s revenue is heavily dependent on the amount of time users spend on the
3 platform and their level of engagement. The more time users spend on TikTok, the more
4 advertising revenue TikTok reaps. Upon knowledge, information, and belief, formed after a
5 reasonable inquiry under the circumstances, TikTok has designed its algorithms to addict users
6 through advanced analytics that create a variable reward system, thereby causing users to spend
7 increased amounts of time on the platform. Upon opening the TikTok application, users are
8 automatically shown an endless stream of videos selected by an algorithm(s). TikTok has “stepped
9 over the midpoint between the familiar self-directed feed and an experience based first on
10 algorithmic observation and inference,” or artificial intelligence:

11 The most obvious clue is right there when you open the app: the first thing you see
12 isn’t a feed of your friends, but a page called “For You.” It’s an algorithmic feed
13 based on videos you’ve interacted with, or even just watched. It never runs out of
14 material. It is not, unless you train it to be, full of people you know, or things you’ve
15 explicitly told it you want to see. It’s full of things that you seem to have
16 demonstrated you want to watch, *no matter what you actually say you want to watch* .
17 . . . Imagine a version of Facebook that was able to fill your feed before you’d friended
18 a single person. That’s TikTok. . . . [The platform is] incredibly addictive.⁸²¹

16 623. TikTok’s algorithms are designed to begin working the minute a user opens the
17 platform. The FYP shows the user a single, full-screen stream of videos, then records how the user
18 reacts. “A second of viewing or hesitation indicates interest; a swipe suggests a desire for
19 something else.”⁸²² With each data point collected, TikTok’s algorithm winnows a mass of videos
20 to a single feed, continually refined to keep users engaging often and at length.

21 624. This algorithmic encouragement of continuous scrolling and interaction makes it
22 hard for users to disengage from the app. A recent ByteDance-funded study, which imaged the

23 _____
24 ⁸²⁰ *Id.* at 16, ¶ 44.

25 ⁸²¹ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019),
26 <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

27 ⁸²² *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
28 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>.

1 brains of TikTok and other social media platform users, found that users engaged with TikTok
2 about 10 times a minute, twice as often as with peer apps.⁸²³

3 625. ByteDance leverages users' inability to disengage as a benefit to attract advertisers,
4 rather than taking steps to address the addictive nature of its platform. A recent TikTok marketing
5 document observed that "the TikTok audience is fully leaned in."⁸²⁴ Marketing research
6 commissioned by TikTok found that, compared to other social media platforms, TikTok users
7 evidenced a higher frequency of rate per minute. TikTok boasted, "[o]ur algorithm and shorter
8 video formats create continuous cycles of engagement, making TikTok the leading platform for
9 Information Density."⁸²⁵

10 626. TikTok's powerful machine-learning algorithms dictate each user's FYP. An
11 estimated 90-95% of the videos viewed on TikTok comes from its algorithms (as opposed to user
12 selection), the highest among Defendants' platforms.⁸²⁶

13 627. The algorithm encourages use of the platform, regardless of whether that use is
14 enjoyable or healthy. TikTok's algorithm is not designed to direct users to videos they want to see,
15 but rather to videos they cannot look away from. From TikTok's perspective, it does not matter
16 whether users are engaging with a video because they are horrified, angry, or upset—the
17 engagement itself is the end goal.

18 628. TikTok's algorithm is a powerful force for addiction. Indeed, TikTok's quest to
19 monopolize user attention often forces users down "rabbit holes." Users end up in these rabbit
20 holes, and become trapped in them, because TikTok has optimized its algorithm's design for
21

22 ⁸²³ *TikTok Ads Break Through Better Than TV And Drive Greater Audience Engagement*, TikTok
23 Bus. (June 2021), <https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf>.

24 ⁸²⁴ *Id.*

25 ⁸²⁵ *Id.*

26 ⁸²⁶ *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
27 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>.

1 retention and time spent on the app.⁸²⁷ TikTok wants to keep users coming back as often as
2 possible for as long as possible, no matter the cost to the user’s health.

3 629. TikTok knows its algorithm causes real harm. After *The Wall Street Journal*
4 documented the pernicious operation of the TikTok algorithm, TikTok admitted internally (but not
5 publicly) that its shortcomings “bring[] into question TikTok’s commitment to user safety,
6 particularly as to younger users[.]”⁸²⁸

7 630. Once users are in a rabbit hole, it is extremely difficult to climb out.⁸²⁹ In general,
8 escaping a rabbit hole requires a user to repeatedly and actively strategize ways to counter the
9 algorithm, pitting individual users’ David against TikTok’s machine-learning Goliath.

10 631. ByteDance’s choices about how to design and structure its app—including choosing
11 not to implement effective age-gating and parental controls, in addition to choosing to design
12 algorithms to maximize engagement—go far beyond benignly organizing the third party posts.
13 Instead, they create an environment and experience suited to ByteDance’s goal of maximizing ad
14 revenues—an environment and experience that is unreasonably dangerous to the children and
15 teens ByteDance targets.

16 632. Alyssa Moukheiber, a treatment center dietitian, explained that TikTok’s algorithm
17 can push children into unhealthy behaviors or trigger a relapse of disordered eating.⁸³⁰ Indeed,
18 several teenage girls interviewed by *The Wall Street Journal* reported developing eating disorders
19 or relapsing after being influenced by TikTok’s algorithm.⁸³¹

20 633. Their experiences are not unique. Katie Bell, a co-founder of the Healthy Teen
21

22 ⁸²⁷ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),
23 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html> [<https://perma.cc/J3L5-35CL>].

24 ⁸²⁸ Utah AG Compl. at 30–31, ¶ 79.

25 ⁸²⁹ Kaitlyn Tiffany, *I’m Scared of the Person TikTok Thinks I Am*, Atl. (June 21, 2021),
26 <https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/>
[<https://perma.cc/5T3M-88ZY>].

27 ⁸³⁰ *Id.*

28 ⁸³¹ *Id.*

1 Project, explained that “the majority of her 17 teenage residential patients told her TikTok played
2 a role in their eating disorders.”⁸³²

3 634. Others, like Stephanie Zerwas, an Associate Professor of Psychiatry at the University
4 of North Carolina at Chapel Hill, could not even recount how many of her young patients told her
5 that “I’ve started falling down this rabbit hole, or I got really into this or that influencer on
6 TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was
7 doing that[.]”⁸³³

8 635. TikTok’s rabbit holes are particularly problematic for young people, whose
9 undeveloped frontal lobes lack the executive function and necessary impulse control to stop
10 watching. The more young users engage by viewing or hesitating on a particular video, the more
11 TikTok’s algorithms learn about the user. The company knows that what it calls “filter bubbles”
12 are harmful but notes it falls within a “grey area” of its policies consisting of material that is not
13 harmful in isolation but “can negatively influence users when the content is consumed in a
14 condensed way.”⁸³⁴ ByteDance uses this feature to exploit the vulnerabilities of children and
15 teenagers and addict them to its platform.

16 636. Indeed, ByteDance admits that its recommendation algorithm creates a “risk of
17 presenting an increasingly homogeneous stream of videos[.]” which feeds and creates addiction.⁸³⁵

18 637. This course of conduct resulted in the United Kingdom’s Information
19 Commissioner’s Office bringing a fine of £12.7 million (\$15.8 million) for breaches of data
20 protection law, including the misuse of children’s personal data.⁸³⁶ The fine rested on TikTok’s
21 failure to obtain authorization from the appropriate responsible adults before processing and using

22 ⁸³² *Id.*

23 ⁸³³ *Id.*

24 ⁸³⁴ Utah AG Compl. at 42, ¶ 115.

25 ⁸³⁵ *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
26 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

27 ⁸³⁶ Tom Fish, *TikTok Handed £12.7M UK Fine For Misusing Children’s Data*, Law360 (Apr. 4,
28 2023), <https://www.law360.com/articles/1593391/tiktok-handed-12-7m-uk-fine-for-misusing-children-s-data>.

1 children’s data, failure to adequately inform users about how the platform uses and shares data,
2 and failure “to ensure that U.K. users’ information was processed lawfully and transparently.”⁸³⁷

3 638. ByteDance uses a series of interrelated design features that exploit known mental
4 processes to induce TikTok’s users to use the platform more frequently, for more extended
5 periods, and with more intensity (i.e., providing more comments and “Likes”). ByteDance knows
6 or should have known that children, whose brains are still developing, are particularly susceptible
7 to these addictive features.

8 639. ByteDance designed the app so users cannot disable the auto-play function on the
9 FYP.⁸³⁸ As noted above, when a user opens the TikTok app or visits the TikTok website, the
10 platform immediately begins playing a video on the user’s FYP. The user may request more
11 videos with a simple upward swipe, and the platform will deliver a seemingly endless video
12 stream. If a user does not proceed from a video, it continues to play on an endless loop. The ability
13 to scroll continuously induces a “flow-state” and distorts users’ sense of time.

14 640. The TikTok app interface is designed with only a limited number of buttons and
15 sections of the app for users to navigate, such that the design does not impede “flow.”

16 641. The FYP also leverages principles of IVR to encourage compulsive usage, in the
17 same fashion as Instagram Reels. A user swipes to receive the next video, and each swipe offers
18 the prospect (but not the certainty) of dopamine-releasing stimuli.

19 642. The cumulative effect of these features is addictive, compulsive engagement. As
20 researchers at the Brown University School of Public Health explained:

21 [T]he infinite scroll and variable reward pattern of TikTok likely increase the
22 addictive quality of the app as they may induce a flow-like state for users that is
23 characterized by a high degree of focus and productivity at the task at hand. . . . Once
24 immersed in the flow-like state, users may experience a distorted sense of time in
25 which they do not realize how much time has passed. Furthermore, the app interface
itself is straightforward and user-friendly, with only a limited number of buttons and
sections of the app for users to navigate, which further enables entrance into “flow.” .

26 ⁸³⁷ *Id.*

27 ⁸³⁸ 2 *Best Ways You Can Turn off TikTok Autoplay*, Globe Calls (July 8, 2022),
28 <https://globecalls.com/2-ways-you-can-turn-off-tiktok-autoplay/>.

1 . . . When they play, they consume the entire device screen, which creates an
2 immersive experience for users.

3 . . .

4 Although the similarity may not be immediately evident, analysis of social media
5 apps reveals that they are designed to function like slot machines — the “swipe
6 down” feature required to refresh one’s feed mirrors pulling a slot machine lever, and
7 the variable pattern of reward in the form of entertaining videos on TikTok simulates
8 the intermittent reward pattern of winning or losing on a slot machine; this pattern
9 keeps individuals engaged under the impression that the next play might be “the one.”
10 . . . Provided that social media apps are functionally akin to slot machines, it is likely
11 that the use of these apps is just as addictive as slot machines and fosters social media
12 addiction, much like how slot machines contribute to gambling addiction.⁸³⁹

13 643. Dr. Julie Albright, a Professor at the University of Southern California, similarly
14 explained that TikTok is so popular because users will “just be in this pleasurable dopamine state,
15 carried away. It’s almost hypnotic, you’ll keep watching and watching.” Users “keep scrolling,”
16 according to Dr. Albright, “because sometimes you see something you like, and sometimes you
17 don’t. And that differentiation—very similar to a slot machine in Vegas—is key.”⁸⁴⁰ TikTok also
18 provides its own set of beauty enhancing filters, which cause insecurities and psychological injury
19 in teens leading to body dysmorphia, eating disorder, self-harm, and in more severe cases, suicide.

20 644. Aza Raskin, the engineer who designed infinite scroll, described the feature as being
21 “as if [social media companies are] taking behavioral cocaine and just sprinkling it all over your
22 interface, and that’s the thing that keeps you coming back and back and back.” Because the
23 infinite scroll does not “give your brain time to catch up with your impulses . . . you just keep
24 scrolling.”⁸⁴¹

25 645. To reinforce this addictive experience, ByteDance intentionally omits the concept of
26 time from their platform, stripping information such as when a user uploaded a video from its

27 ⁸³⁹ Sophia Petrillo, *What Makes TikTok so Addictive?: An Analysis of the Mechanisms Underlying*
28 *the World’s Latest Social Media Craze*, Brown Undergraduate J. Pub. Health (Dec. 13, 2021),
<https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/>.

⁸⁴⁰ John Koetsier, *Digital Crack Cocaine: The Science Behind TikTok’s Success*, Forbes (Jan. 18,
2020), <https://www.forbes.com/sites/johnkoetsier/2020/01/18/digital-crack-cocaine-the-science-behind-tiktoks-success/?sh=4c24917778be> [<https://perma.cc/K6LZ-6ANF>].

⁸⁴¹ *Id.*

1 endless stream of videos. In the FYP, there is no way to discern how long ago the video was
2 posted, or when the user who posted the video joined TikTok.

3 646. On at least some phones, TikTok is designed to cover the clock displayed at the top
4 of user's iPhones, preventing them from keeping track of the time spent on TikTok.⁸⁴²

5 647. ByteDance has designed the app so that users can see, however, how many times a
6 video was "Liked," commented on, or shared. So, the only thing users can quantify within the app
7 is the approval or disapproval of others.

8 648. In June 2022, after receiving public criticism regarding its platform's effects on
9 people's mental health, ByteDance introduced various tools to purportedly encourage users to take
10 a break from infinite scrolling, such as a "Take a Break" reminder and time-limit caps. ByteDance
11 chose not to activate these tools by default and instead buried them behind "a hidden series of
12 menus" so users would not use them.⁸⁴³ Even for minors, once they have exceeded 100 minutes of
13 usage a day, TikTok only "reminds" them that these "Take a Break" tools exist upon opening the
14 app, but does not activate them by default.

15 649. In March of 2023, TikTok announced additional measures to quell public criticism
16 about the addictiveness of its platform. Among these changes is the fact that minors under age 18
17 will by default have their use limited to one hour. There is less to this time limit than meets the
18 eye. Children whose accounts are paired with parental accounts will need a code from the parent
19 to extend the time limit. Children with unpaired accounts, however, can easily extend the time
20 limit or even disable it themselves.

21 650. In addition to infinite scroll, ByteDance has designed TikTok so it has other design
22 features that exploit social psychological impulses to induce children to use TikTok daily and for
23 extended periods of time, adding to the platform's addictive nature.

24 651. Several TikTok features actively encourage users to generate ephemeral photos and
25 videos. This promotes compulsive use, because users risk missing posts by their friends and others

26 ⁸⁴² Louise Matsakis, *On TikTok, There is No Time*, *Wired* (Oct. 3, 2019),
27 <https://www.wired.com/story/tiktok-time/> [<https://perma.cc/F8D6-UTRD>].

28 ⁸⁴³ *See* Utah AG Compl. at 16, ¶ 43.

1 if they do not check TikTok at least daily.

2 652. A TikTok user can, for example, post expiring “Stories,” short videos that disappear
3 after 24 hours. These videos do not otherwise appear in a user’s feed. TikTok’s live stream feature
4 is similar.

5 653. A relatively new feature, “TikTok Now,” pushes daily notifications to users to share
6 “authentic, real-time images or 10-second videos at the same time as your friends.”⁸⁴⁴ ByteDance
7 designed this feature so that once a user gets the notification, the user has three minutes to post an
8 image or video. That user cannot view friends’ “TikTok Now” posts without sharing one of their
9 own, and posts submitted outside of the three-minute window are marked as “late.” TikTok
10 preserves a user’s history in a calendar view, adding to the pressure to visit the app daily and when
11 notified by TikTok to do so. ByteDance designed these features to increase responsiveness to
12 notifications and keep young users locked into the platform, as they do not want to miss out on
13 this perceived social activity.

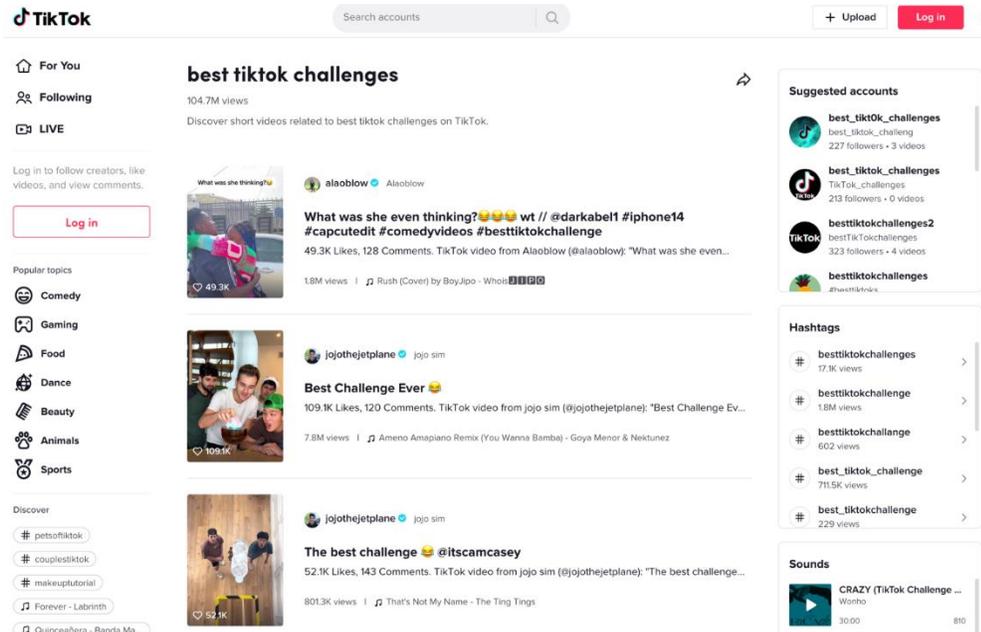
14 654. Like “Snap Streaks,” “TikTok Now” does not enhance the communication function
15 of the platform, but simply exploits young users’ susceptibility to persuasive design, teenage
16 social anxiety, and FOMO. ByteDance’s insidious design of “TikTok Now” also employs point
17 scoring and competition with others to drive frequent and continuous engagement by children,
18 who otherwise risk checking in late and alienating other peers participating in the exchange.

19 655. Like the other Defendants’ platforms, ByteDance designed TikTok to leverage the
20 principle of IVR by encouraging users to “like,” share, or reshare videos that others have created
21 or posted. Receiving a “Like” or “Reshare” indicates that others approve of a user’s posts, and
22 satisfies the user’s natural, developmentally predictable desire for acceptance. As discussed above,
23 “Likes” activate the reward region of the brain and release dopamine to create a positive feedback
24 loop.⁸⁴⁵ Users return to TikTok again and again, hoping for yet another pleasurable experience.

25
26 ⁸⁴⁴ *TikTok Now*, TikTok Inc., <https://www.tiktok.com/creators/creator-portal/product-feature-updates/tiktok-now>.

27 ⁸⁴⁵ Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*
28 *Development of Social Media Addiction* at 1, 11(7) *J. Neurology & Neurophysiology* 507 (2020),
(footnote continued)

1 656. ByteDance also designed TikTok to use reciprocity to manipulate users into using
2 the platform. One example is the “Duet” feature, which allows users to post a video side-by-side
3 with a video from another TikTok user. Users utilize “Duet” to react to the videos of TikTok
4 creators. ByteDance intends the response to engender a reciprocal response from the creator of the
5 original video, inducing them to return to the app.



16 657. Another “core feature” of TikTok are “challenges.” Challenges are campaigns that
17 compel users to create and post in TikTok certain types of videos, such as performing a dance
18 routine or a dangerous prank. Challenge videos have been described as a “cornerstone” of TikTok
19 and are among the most popular features of the platform.⁸⁴⁶

20 658. Challenges are incorporated into TikTok’s architecture and user interface.
21 ByteDance actively promotes what it determines to be the “best,” i.e., most likely to keep users
22 engaged, challenges to its users and fosters the associated competition and social rewards to
23 achieve near-continuous engagement with the platform.

24 659. ByteDance also encourages businesses to create challenges as a form of marketing,

25 <https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf>.

26
27 ⁸⁴⁶ Brent Barnhart, *TikTok Challenges: what they are and why they’re great for brands*, Spout Social
28 (May 4, 2022), <https://sproutsocial.com/insights/tiktok-challenges/>.

1 explaining that challenges are “geared towards building awareness and engagement,” and
2 “research shows that they can deliver strong results” and increased return on ad spending “at every
3 stage of the funnel.”⁸⁴⁷

4 660. While ByteDance extolls the revenue potential from challenges, young users face
5 new and serious harms, as the challenges’ stakes grow more extreme and dangerous, a foreseeable
6 consequence of TikTok’s engagement-maximization design. Numerous child users have injured or
7 even killed themselves or others participating in viral pranks to obtain rewards and increase the
8 number of “Likes,” views, and followers.

9 661. A study of adolescents and young adults who participated in dangerous challenges
10 found that “engaging in online challenges to gain likes and views was reported as highly
11 important” to the participants. Study participants claimed to have received from sixty to two
12 million views of their challenge videos. Perhaps not surprisingly given the study involved
13 adolescents, these children did not seriously contemplate the possible outcomes from their stunts:
14 “Our participants overlooked or were unaware of the short-term and long-term risks associated
15 with the challenges.” Moreover, “participants also frequently encouraged others to perform the
16 same or similar challenges in their posts, thus potentially contributing to social media through
17 propagating the challenge.”⁸⁴⁸ In fact, ByteDance intentionally promotes these challenges due to
18 their popularity.⁸⁴⁹

19 662. This is not news to ByteDance. Its own internal platform research has found that the
20 number one most identified reason for teen participation in challenges is “[g]etting
21 views/likes/comments,” followed by “[i]mpressing others online.” ByteDance therefore knows,

22 ⁸⁴⁷ *Branded Hashtag Challenge: Harness the power of participation*, TikTok Bus. (Oct. 18, 2021),
23 <https://www.tiktok.com/business/en-US/blog/branded-hashtag-challenge-harness-the-power-of-participation>.

24 ⁸⁴⁸ Rebecca Roth *et al.*, *A Study on Adolescents’ and Young Adults’ TikTok Challenge Participation*
25 *in TikTok in South India*, 1 Hum. Factors Health Care, Dec. 2021, at 5,
26 <https://www.sciencedirect.com/science/article/pii/S2772501422000021/pdf?md5=3f58814874a5ec80690a5bcd920e4336e&pid=1-s2.0-S2772501422000021-main.pdf>.

27 ⁸⁴⁹ See TIKTOK3047MDL-001-00000813 (“The algorithm is designed to surface viral content,
28 regardless of its source.”).

1 or in the exercise of reasonable care should know, that young users’ quest for social acceptance
2 will cause them to participate in dangerous online challenges to get “likes” or impress their peers.
3 It is also foreseeable that the challenge architecture on TikTok will be used by young users to
4 promote dangerous, deadly, and destructive challenges that ByteDance may not initially know
5 about or actively promote.

6 663. Death, injury, and destruction are the result of design choices made by ByteDance in
7 the TikTok platform, including but not limited to (1) failure to verify age and identity of users,
8 which allowed children as young as 8 or 9 to see these dangerous challenges; (2) defaulting the
9 youngest users into public accounts, where some post dangerous stunts to increase their views or
10 “Likes”; (3) designing the TikTok algorithm to push this material to young children without
11 regard to safety; and (4) failing to include warnings to children or their parents that many of the
12 challenges users see on TikTok are dangerous and potentially fatal.

13 664. TikTok’s algorithms also promote challenges that specifically target school
14 districts.⁸⁵⁰ As a result of challenges, school districts have sustained property damage, ranging
15 from stolen urinals to smashed floor tiles. In response, schools have been forced to lock down
16 bathrooms for large portions of the day.⁸⁵¹ Other schools have resorted to diverting staff to
17 monitor bathrooms during the school day.⁸⁵² Repairing damages resulting from challenges puts
18 strain on schools that already have budget constraints. Even for schools that do not suffer property
19 damage, responding to threats of the challenge and communicating with students and families
20 diverts significant time away from classroom instruction and other administrative activities.

21 665. Indeed, threats on Defendants’ platforms by students seeking the psychological
22 rewards Defendants’ platforms offer require school safety agents, police, or other staff to stop

23 ⁸⁵⁰ Megan Marples, *The ‘devious licks’ TikTok challenge has students stealing toilets and*
24 *vandalizing bathrooms*, CNN (Sept. 18, 2021), [https://www.cnn.com/2021/09/18/health/devious-](https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-challenge-wellness/index.html)
25 [licks-tiktok-challenge-wellness/index.html](https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-challenge-wellness/index.html).

26 ⁸⁵¹ *Id.*

27 ⁸⁵² *Viral ‘devious licks’ TikTok challenge encourages kids to steal from school*, PBS (Oct. 25, 2021),
28 [https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-](https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-from-school)
[from-school](https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-from-school).

1 what they're doing and investigate immediately, which is a resource intensive and disruptive
2 endeavor. Investigating threats puts a strain on schools' resources.

3 **d. ByteDance's features inflict impossible image standards and encourage**
4 **negative appearance comparison.**

5 666. ByteDance designed TikTok with image-altering filters that harm users. These filters
6 allow children to artificially change their appearance, for example, by lightening their skin and
7 eyes, giving them glowing tan skin, changing facial structure, or giving them larger lips or
8 fluttering eyelashes.

9 667. Young people often then compare the filtered images to their real-life appearance,
10 developing a negative self-image based on unrealistic, artificial images.⁸⁵³ Many young girls use
11 image-altering filters every day, harming their mental health. Those filters subconsciously make
12 girls feel imperfect and ugly, "reduc[ing] their self-compassion and tolerance for their own
13 physical flaws."⁸⁵⁴

14 668. So compelling is the desire to resemble more closely the filtered ideal that there are
15 online tutorials explaining how to recreate certain filters using makeup. Children's idealization of
16 their filtered image is externally reinforced when the filtered images receive more "Likes,"
17 comments, and other interaction. Young people also compare these interaction "scores" to those of
18 friends and celebrities who use filters, reinforcing the idea that beauty depends on matching a
19 digital ideal.

20 669. The newest TikTok filter is "Bold Glamour." The filter uses artificial intelligence to
21 subtly reshape the user's face, enlarging the eyes, lifting the cheek bones while thinning the
22 cheeks, smoothing the skin and plumping the lips. The effect is a highly "idealized" yet realistic
23 version of the user. Moreover, the filter is difficult to detect since the effect moves with user

24 ⁸⁵³ Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are*
25 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),
26 <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>
[<https://perma.cc/Z8RQ-TC49>].

27 ⁸⁵⁴ Ana Javornik *et al.*, *Research: How AR Filters Impact People's Self-Image*, Harv. Bus. Rev.
28 (Dec. 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

1 movements in real time.



11 670. “Bold Glamour has the power to dramatically distort reality and reinforce narrow
12 and unattainable beauty standards.”⁸⁵⁵

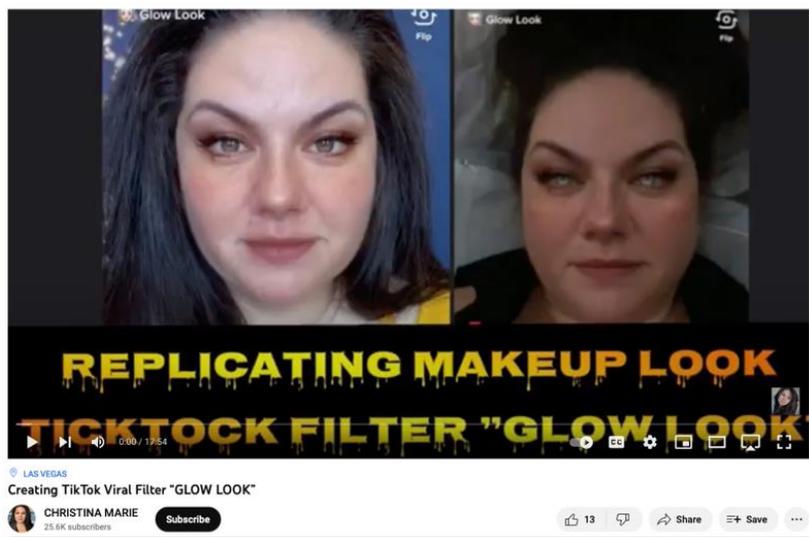
13 671. Many mental health professionals have written that TikTok filters such as “Bold
14 Glamour” and others exacerbate teen mental health problems as children, particularly girls, strive
15 for a standard of beauty that is functionally impossible to achieve, with every TikTok filter
16 creating a test that they are doomed to fail.⁸⁵⁶

17 672. TikTok’s algorithms often work in concert with those of other social media
18 platforms, like Meta’s. A teen may learn about a harmful topic through Meta’s recommendation
19 technologies on Instagram, which is feasibly subsequently identified by TikTok’s algorithm(s),
20 and TikTok will then amplify and promote the same harm through a series of how-to videos. Like
21 Meta, TikTok has tried to boost engagement and keep young users hooked to its social media
22 platform by any means necessary. Indeed, TikTok similarly sends push notifications and emails to
23 encourage addictive behavior, to increase use of their platform, and to in their own words,

24 ⁸⁵⁵ *Beauty brand Dove is speaking out against the toxic TikTok ‘Bold Glamour’ filter*, Women’s
25 Health (Mar. 9, 2023), <https://www.womenshealthmag.com/uk/beauty/body/a43259141/tiktok-bold-glamour-filter/>.

26 ⁸⁵⁶ Anna Kaplan, *‘Bold glamour’ TikTok filter can create unrealistic beauty standards and harm
27 mental health, experts say*, Today (Mar. 2, 2023), <https://www.today.com/health/bold-glamour-tiktok-filter-mental-health-rcna73044>.

1 “recall”⁸⁵⁷ users back to the platform. TikTok’s communications are triggered through information
2 its algorithms collect about users, communications that are then “pushed” to users frequently
3 throughout the day.



15 673. Other platform features that work in combination to cause addiction and other harms
16 include: (1) a platform-imposed limit to the length of videos. Initially, the maximum video time
17 was 60 seconds. The limit was later increased to 3 minutes and is currently 10 minutes. This limit
18 is imposed to keep users in a flow-like focused state. A user is more likely to become bored and
19 end their session during a long video than during several varying videos. Video length limits in
20 Defendants’ platforms have conditioned users to have a shorter attention span across years of use;
21 (2) TikTok app notifications sent to the devices of children well after normal bedtime hours,
22 disrupting sleep patterns and causing psychological injury. It was only recently that TikTok
23 reportedly stopped the platform from sending notifications to users between the age of 13 and 15
24 after 9 p.m.; (3) TikTok’s interface, which positions buttons on the bottom right of the screen, to
25 avoid the milliseconds of delay of discomfort that could disrupt the flow-like state of majority
26 right-handed users tapping the like or comment buttons if placed elsewhere on the screen; (4) the

27 ⁸⁵⁷ Utah AG Compl. at 15, ¶ 40.

1 way in which TikTok, unlike other platforms, continues to play a video’s audio, and the top
2 quarter of the video, while users view comments on the video. This design decision avoids
3 disrupting a user’s heightened focused “flow-state”; (5) TikTok’s interface, which places buttons
4 and profiles overlaid on top of the videos, rather than in a separate area. This design prevents there
5 from being any barrier between videos (such as a horizontal bar across the screen on the bottom of
6 one video and on top of the next) and prevents users from having any pause time between videos
7 to evaluate whether they should continue using the app in that moment before more
8 algorithmically selected videos are played on their screen; (6) Videos that automatically start
9 playing as a user scrolls. Videos automatically restart once they conclude. In some circumstances,
10 such as when a user sends a link of a video on TikTok to another user that views it in a web
11 browsing app, the next video after that video will automatically play without the user scrolling;
12 and (7) that, upon opening the app, users’ view of the first video loaded is obstructed with a
13 message saying, “swipe for more” and a graphic of a hand and figure swiping up. The user must
14 scroll down to see an unobstructed video. This design feature trains users to reflexively scroll to
15 the next video once one video ends. Thus, addiction is initiated by the app before the user even
16 sees the first piece of content.

17 **4. ByteDance Materially Contributes to Content on TikTok.**

18 674. A TikTok poster does not create content in a vacuum. ByteDance contributes to
19 TikTok content in a number of ways such that it is materially responsible in whole or in part for
20 creation or development of material posted on the platform.

21 675. ByteDance creates images and GIFs for users to use in their TikTok videos to keep
22 viewers returning to the platform. It makes video effects that content creators can incorporate.
23 Some of the newest visual contributions from TikTok are “stickers.” With this feature, a content
24 creator can pin stickers to moving objects so that it follows the subject as they move throughout
25 the scene. ByteDance acknowledges that “the sticker looks as though it’s *part* of the video.”⁸⁵⁸

26
27 ⁸⁵⁸ *Staying up to date with features*, TikTok Inc., <https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/>.
28

1 The stickers even change size relative to the video’s movement.⁸⁵⁹

2 676. In addition to providing some of the visual components of a video, ByteDance often
3 also provides the sound. ByteDance has “an extensive library” of sounds for creators to add to
4 their videos. Moreover, ByteDance has licensed a huge music catalog that creators can incorporate
5 into their videos. In November 2020, TikTok announced a new agreement with Sony Music
6 Entertainment to make songs available across the TikTok app;⁸⁶⁰ in December 2020, TikTok
7 announced another such agreement with Warner Music Group (“WMG”);⁸⁶¹ and in February
8 2021, TikTok announced a “global” licensing agreement with Universal Music Group
9 (“UMG”).⁸⁶²

10 677. When a video becomes sufficiently popular, TikTok reaches out to and actively
11 engages with the poster who, once that threshold is met, is referred to as a “creator.” ByteDance
12 provides special tools, instructional videos and, critically, recommendations as to content and
13 structure for the video. For example, a “creator” might be told to break a longer video up into a
14 series of shorter videos to get additional views. ByteDance might suggest certain music or
15 captions be added. The “creator” would be encouraged to add certain hashtags that might increase
16 the video’s visibility on the platform. On information and belief, all TikTok content and
17 associated metadata is modified to include tracking systems, and every time the content is viewed,

18 ⁸⁵⁹ *Id.*

19 ⁸⁶⁰ *TikTok announces agreement with Sony Music Entertainment*, TikTok Inc. (Nov. 2, 2020),
20 <https://newsroom.tiktok.com/en-us/tiktok-announces-agreement-with-sony-music-entertainment>.

21 ⁸⁶¹ Murray Stassen, *Warner Music Group Inks Licensing Deal with TikTok*, Music Bus.
22 Worldwide (Jan. 4, 2021), <https://www.musicbusinessworldwide.com/warner-music-group-inks-licensing-deal-with-tiktok/>; *see also Warner, TikTok Agree to new Licensing Deal*, Hits
23 Daily Double (Dec. 19, 2020),
24 <https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-LICENSING-DEAL> (“[F]ormer WMG executives Ole Obermann and Tracy Gardner recently
25 joined TikTok to oversee global music development. . . . [Gardner] now holds the title of Head
of Label Licensing & Partnerships at TikTok. . . . [Obermann]’s now TikTok’s Global Head of
26 Music.”).

26 ⁸⁶² Murray Stassen, *TikTok and Universal Music Group Sign Global Licensing Deal*, Music Bus.
27 Worldwide (Feb. 8, 2021), <https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/>.

1 tracking codes and other data are downloaded to the device and information is actively relayed to
2 TikTok’s server.

3 678. TikTok likewise promises some “creators” that it will amplify their content and
4 promote them based solely on creator status. ByteDance internal documents show that, in addition
5 to letting the algorithm determine what goes viral, the company also hand picks specific videos to
6 artificially increase their distribution—a practice known internally as “heating.” Overall, 1% to
7 2% of videos viewed on TikTok have been “heated.” According to media reports, ByteDance uses
8 ‘heating’ to court influential “creators” or profitable brands to engage with users on TikTok.⁸⁶³

9 679. ByteDance has multiple methods of compensating “creators” who, in conjunction
10 with ByteDance, make content for the platform. These methods include receiving tips and gifts
11 from viewers, special gifts available during TikTok LIVE presentations, and contributions from
12 TikTok’s “creator fund.” TikTok obtains PayPal information from “creators” and sends them
13 money daily, with communications and full-screen notifications urging them to post more and to
14 post on multiple surfaces of the TikTok platform.

15 680. ByteDance’s contribution to the content on TikTok is further recognized in the rights
16 it asserts to content on the TikTok platform. In its Terms of Service (“Last updated: February
17 2019”), TikTok requires that all users license to TikTok an unconditional, irrevocable, royalty-
18 free, fully transferable, perpetual worldwide license to use, modify, adapt, reproduce, publish,
19 transmit all material submitted by Users onto TikTok. TikTok further requires that all users waive
20 any rights to inspect or approve their material being used for marketing or promotional materials.
21 Further, they require that users waive any and all rights of privacy and publicity. TikTok requires
22 that all users grant TikTok total control over the material that’s published – including the right to
23 cut, crop, and edit. Through these licensing provisions, TikTok effectively becomes the owner of
24 all content on the platform.

25
26 _____
27 ⁸⁶³ Emily Baker White, *TikTok’s Secret ‘Heating’ Button Can Make Anyone Go Viral*, Forbes (Jan.
28 20, 2023), <https://www.forbes.com/sites/emilybaker-white/2023/01/20/tiktoks-secret-heating-button-can-make-anyone-go-viral/> [<https://perma.cc/28S7-MC97>].

1 **a. ByteDance’s features include impediments to discontinuing use.**

2 681. Even if a user escapes the addictiveness of TikTok’s design and decides to delete
3 their account, ByteDance makes doing so a lengthy and complex undertaking. The deletion
4 process is designed to encourage users to retain their accounts, even if their stated reason for
5 deletion is that the platform is endangering their safety or health.

6 682. When a user selects the “Deactivate or delete account” in the “Account” section of
7 the TikTok app, the user is presented an option to “[d]elete or deactivate?” Deactivating an
8 account will preserve the user’s data, but hide it from the platform; deleting, on the other hand,
9 will permanently delete all data associated with the account.

10 683. However, ByteDance designed TikTok so that deletion is not immediate. The data
11 and account are preserved for 30 days, during which time the user can reactivate their account.

12 684. If a user selects the “Delete account permanently” option, the user is asked “Why are
13 you leaving TikTok?” The user must select from the following list: (1) I’m leaving temporarily;
14 (2) I’m on TikTok too much; (3) Safety or privacy concerns; (4) Too many irrelevant ads; (5)
15 Trouble getting started; (6) I have multiple accounts; or (7) Another reason.

16 685. If a user selects “I’m on TikTok too much,” ByteDance makes a last-ditch effort to
17 retain the user by reminding the user that a limit can be set on the user’s watch time on the
18 platform. If a user selects “Safety or privacy concerns,” the user is provided a list of resources to
19 “secure” the account. If the user selects “[a]nother reason,” a written explanation must be
20 provided. The only option that does not provide or require further information is “I have multiple
21 accounts.” ByteDance isn’t worried about users deleting merely one account if they already have
22 multiple others.

23 686. Once a user selects a reason for deletion, the next screen prompts the user to
24 download their TikTok data.

25 687. Before the user continues the deletion, the platform requires the user to check a box
26 at the bottom of the screen that says, “[b]y continuing, you reviewed your data request and wish to
27 continue deleting your account.” This contrasts with the process of a user “agreeing” to the Terms
28 of Service and Privacy Policy during the registration process, which does not require a separate

1 confirmation.

2 688. Once the user confirms a desire to continue with the deletion process, the platform
3 takes the user to yet another screen, which yet again asks whether the user wants to “delete this
4 account?” The text also explains that the account will be deactivated for 30 days, during which the
5 user may reactivate the account, and after 30 days, the account and data associated with it will be
6 permanently deleted. It goes on to warn that if a user deletes the account, the user will no longer
7 be able to do many things in the app.

8 689. Once a user again confirms that they want to delete their account, TikTok requires
9 validation with a 6-digit code sent to the telephone number or email address associated with the
10 account. Only after the user receives and enters the code may they finally “delete” their account
11 (after waiting 30 days).

12 690. ByteDance’s account deletion process is inadequate for children attempting to
13 escape its addictive and harmful platform. Requiring a child to go through multiple steps, and
14 offering alternatives, as well as a list of things they are giving up, is designed to convince them to
15 change their mind. Moreover, requiring the user to maintain a deactivated account for 30 days,
16 rather than deleting it on demand, increases the chance that an addicted user will relapse and
17 return to the app.

18 691. ByteDance’s intentionally cumbersome deletion process prioritizes the retention of
19 young users, and ad revenue that they generate, over their well-being.

20 **5. ByteDance failed to adequately warn NYC Plaintiffs and the public about the**
21 **harms its platform causes or to provide instructions regarding safe use.**

22 692. Since TikTok’s inception, ByteDance has failed to adequately warn the public,
23 including NYC Plaintiffs and members of NYC Plaintiffs’ community, about the physical and
24 mental health risks its product poses. These risks include, but are not limited to, product abuse and
25 addiction, dissociative behavior, damage to body image, social isolation, and a plethora of mental
26 health disorders like body dysmorphia, eating disorders, anxiety, depression, insomnia,
27 ADD/ADHD exacerbation, suicidal ideation, self-harm, suicide, and death.

28 693. ByteDance targets young users via advertising and marketing materials distributed

1 throughout traditional as well as digital media, including other social media platforms. ByteDance
2 fails to provide adequate warnings in advertising and marketing campaigns to the public or
3 potential adolescent consumers of the physical and mental harms associated with using TikTok.

4 694. ByteDance heavily advertises its platform on YouTube and Snapchat, where it
5 knows it can effectively reach younger users. In 2019, for example, 80% of TikTok’s advertising
6 spending was on Snapchat.⁸⁶⁴

7 695. One TikTok ad compiles viral videos featuring people of all ages and sets the video
8 to the pandemic musical hit: *Bored in the House*, by a popular TikTok creator.⁸⁶⁵ The 15-second
9 video notes, “if it’s in culture, #ItStartsonTikTok.”⁸⁶⁶ Zhu highlighted the importance of the U.S.
10 teen market to TikTok, admitting that, in China, “teenage culture doesn’t exist” because “teens are
11 super busy in school studying for tests, so they don’t have the time and luxury to play social media
12 apps.”⁸⁶⁷ On the other hand, teen culture in the United States is “a golden audience.”⁸⁶⁸

13 696. Other advertisements ByteDance places on YouTube promote TikTok as a family-
14 friendly platform. For example, one commercial features parents impersonating their children,
15 explaining that “[p]arents roasting their kids is the best kind of family bonding.”⁸⁶⁹ Another
16 TikTok ad asks creators what TikTok means to them. Responses include “family,” “sharing
17 special moments with my daughter,” and a featured appearance by well-known TikTok creator
18

19 _____
20 ⁸⁶⁴ *TikTok – Snapchat’s Biggest Advertiser – What’s the strategy*, Media Radar (Feb. 24, 2020),
<https://mediaradar.com/blog/tiktok-snapchat-advertising-strategy/>.

21 ⁸⁶⁵ *TikTok, It Starts on TikTok: Bored in the House*, YouTube (Sept. 9, 2020),
<https://www.youtube.com/watch?v=DWZCgkmcIjE>.

22 ⁸⁶⁶ *Id.*

23 ⁸⁶⁷ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.
24 Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%20Dups,the%20rest%20of%20the%20globe>
25 [<https://perma.cc/UR2Q-KEF7>].

26 ⁸⁶⁸ *Id.*

27 ⁸⁶⁹ *Family Impressions, Compilation*, YouTube (Dec. 11, 2020),
28 <https://www.youtube.com/watch?v=6EYzm25gW-s>.

1 Addison Rae, who says TikTok represents “family and fun.”⁸⁷⁰

2 697. ByteDance released another TikTok ad, part of the *It Starts on TikTok* ad campaign,
3 and scheduled it to release on the linear TV, digital media, digital out-of-home, radio and
4 TikTok’s own social channels.⁸⁷¹ The tagline for the campaign was “[l]oving all of you and the
5 things you do. Celebrating you” and featured a series of viral clips of various cheerful scenes
6 depicting people gathered with friends and family of all ages.⁸⁷²

7 698. ByteDance is also one of the biggest advertisers on Snapchat. In 2019, ByteDance
8 accounted for 4.4% of Snapchat’s advertising revenue.⁸⁷³ ByteDance knows that advertising on
9 Snapchat is an effective way to reach a young audience. Snap claims that its Snapchat platform
10 reaches 90% of people aged 13–24 years old, and 75% of people aged 13–34 years old in the
11 United States.

12 699. Despite its funny, cheerful ads featuring smiling families and funny images, TikTok,
13 as designed, presents serious risks to young users on the platform, through its distinctive and
14 manipulative platform features, including a lack of adequate age and identity verification tools, as
15 well as inadequate parental controls.

16 700. ByteDance fails to adequately warn young users of these risks beginning with the
17 first stages of the platform registration process. At account setup, TikTok contains no warning
18 labels, banners, or conspicuous messaging to adequately inform adolescent users of platform risks,
19 potential dangers, and physical and mental harm associated with usage of the platform. Instead,
20 ByteDance allows underage users to easily create an account (or multiple accounts) and fully
21 access the platform.

22 ⁸⁷⁰ *TikTok Creators Share Their Thoughts About TikTok*, YouTube (Aug. 10, 2020),
23 <https://www.youtube.com/watch?v=KAvEGBv7HVM>.

24 ⁸⁷¹ Todd Spangler, *TikTok Launches Biggest-Ever Ad Campaign as Its Fate Remains Cloudy*,
25 *Variety* (Aug. 18, 2020), <https://variety.com/2020/digital/news/tiktok-advertising-brand-campaign-sale-bytedance-1234738607/>.

26 ⁸⁷² *Id.*

27 ⁸⁷³ Robert Williams, *TikTok is the biggest advertiser on Snapchat, study says*, *MarketingDive* (Mar.
28 16, 2020), <https://www.marketingdive.com/news/tiktok-is-the-biggest-advertiser-on-snapchat-study-says/574164/>.

1 701. ByteDance’s lack of appropriate warnings continues once a child has TikTok.
2 ByteDance does not suitably inform child users that their data will be tracked, used to help build a
3 unique algorithmic profile, and potentially sold to TikTok’s advertising clients.

4 702. Alarmingly, ByteDance also does not adequately warn young users before
5 facilitating adult connections and interactions that adult predators use its platform.

6 703. ByteDance’s failure to adequately warn young users about the risks of the platform
7 continues even if they display signs of addiction or habitual and compulsive use. Besides the
8 disabled by default “Take a Break” reminder, ByteDance does not warn users when their screen
9 time reaches harmful levels or when young users are accessing the platform on a habitual basis.

10 704. Not only does ByteDance fail to adequately warn users about the risks associated
11 with TikTok, but it also does not provide sufficient instructions on how children can safely use the
12 platform. A reasonable and responsible company would instruct children on best practices and
13 safety protocols when using a platform known to contain danger and health risks.

14 705. New tools implemented on TikTok in 2023—such as the addition of content
15 filtering to Family Pairing, and the imposition of a default 60 minute screen time limit for
16 minors—will not remedy prior harms suffered or damages incurred by NYC Plaintiffs.⁸⁷⁴
17 Moreover, the efficacy of such tools is questionable. TikTok’s core business still relies on the use
18 of algorithms and other intermittent variable rewards that manipulate young users to spend as
19 much time on the platform as possible. Providing optional tools to young users who are addicted
20 to or dependent on the platform, and relying on their own self-control to address the problems
21 TikTok’s design features have caused, or putting the burden on parents to try to combat the
22 platform’s design features, will not solve the problem.

23 706. ByteDance failed to adequately warn parents about all the foregoing dangers and
24 harms. ByteDance’s failure to properly warn and instruct adolescent users or their parents has
25 proximately caused significant harm to NYC Plaintiffs, who have expended and continue to
26

27 ⁸⁷⁴ *Updating Family Pairing and establishing TikTok’s Youth Council*, TikTok Inc. (June 27, 2023),
28 <https://newsroom.tiktok.com/en-us/updating-family-pairing-and-establishing-tiktoks-youth-council>.

1 expend significant resources addressing the impact of Snap’s conduct on NYC Plaintiffs’
2 operations, including providing additional support to impacted youth.

3 **6. ByteDance Knows That TikTok Harms Many Young Users.**

4 707. ByteDance has a Trust and Safety division charged with identifying issues in the
5 TikTok platform that are injurious to young users, monitoring malign and exploitative videos sent
6 to young users, and recording, analyzing, and tabulating the mental and physical injuries young
7 users sustain through their use of the TikTok platform.

8 708. TikTok Trust and Safety division personnel have engaged in thousands of
9 communications through Lark discussing safety and health concerns arising from young users’
10 addictive use of the TikTok platform; algorithmic designs that direct TikTok users to malign
11 videos promoting depression, suicidality, eating disorders and negative body image; dangerous
12 and deadly TikTok challenges; and the exchange of CSAM on TikTok. These concerns have been
13 shared throughout the highest levels of TikTok Inc. and with engineers at ByteDance Ltd. who
14 designed the TikTok platform.⁸⁷⁵

15 709. TikTok is fully aware of the risks its platform poses to adolescents and
16 acknowledges that children are “more easily persuaded” and “likely don’t understand the risks of
17 unhealthy usage.”⁸⁷⁶ Specifically, TikTok has acknowledged that “13-18 yo [TikTok] users are
18 severely struggling with mental health, including thoughts of suicide and self-harm.”⁸⁷⁷ In an
19 internal digital well-being safety report, TikTok has also admitted that the design of its platform
20 can trigger addictive behaviors that harm mental health:

21 An internal study indicates that 50% of inactive TikTok users cited time management
22 as an issue, 24% reported too many notifications, and 23% reported too much time
23 spent on TikTok. . . . [C]ompulsive usage correlates with a slew of negative mental

24 ⁸⁷⁵ For example, TikTok publicly announced to the Office of the United Nations High Commissioner
25 for Human rights that it was using NCMEC’s image hashing technology to detect CSAM material,
26 but then admitted internally that it had never used those tools, writing “could you please share the
27 current status of the issue? From previous chat in the group, we promised we were using NCMEC
28 hashed [sic] to detect CP [CSAM] content, but we actually didn’t.” Utah AG Compl. at 36, ¶ 97.

⁸⁷⁶ Utah AG Compl. at 18–19, ¶ 52.

⁸⁷⁷ Utah AG Compl. at 18–19, ¶ 52.

1 effects like loss of analytical skills, memory formation, contextual thinking,
2 conversational depth, empathy, and increased anxiety. Various similar studies . . . also
3 conclude that compulsive usage interferes with essential personal responsibilities like
sufficient sleep, work/school responsibilities, and connecting with loved ones.⁸⁷⁸

4 **E. FACTUAL ALLEGATIONS AS TO GOOGLE**

5 710. Eric Schmidt, the former CEO of Google and more recently, parent company
6 Alphabet, Inc., recently acknowledged the powerful, and purposeful, addictive effect of social
7 media. Social media platforms are about “maximizing revenue,” Mr. Schmidt said, and the best
8 way to maximize revenue is to “maximize engagement.”⁸⁷⁹ As Mr. Schmidt continued, in pursuit
9 of their goal of maximizing engagement to increase revenues, social media platforms “play[] into
10 the addiction capabilities of every human[.]”⁸⁸⁰

11 711. Google’s YouTube platform is no exception. It includes specific, carefully calibrated
12 features that are known to exploit the mental processes of its users to keep them engaged for as
13 long, as frequently, and as intensely as possible. Google knows that children and teenagers who
14 flock in droves to its YouTube platform are particularly susceptible to these features. The impact
15 of YouTube’s addictive power on American youth has been devastating.

16 **1. Background and overview of YouTube.**

17 712. YouTube is a social media platform that allows users to post and consume countless
18 hours of videos about virtually any topic imaginable. YouTube is available without any age
19 verification feature or adequate parental controls, and comes pre-installed in many Smart-TVs,
20 mobile devices, various digital media players like Roku, and video game consoles like
21 PlayStation, Wii, Xbox and Nintendo.

22 713. YouTube allows users to search for specific videos. It also employs a powerful
23 algorithm that exploits detailed user information to target each individual user with hours upon
24 hours of videos recommended by YouTube.

25 ⁸⁷⁸ Utah AG Compl. at 18–19, ¶ 52.

26 ⁸⁷⁹ Issie Lapowsky, *Eric Schmidt: Social media companies ‘maximize outrage’ for revenue*, Protocol
27 (Jan. 6, 2022), <https://www.protocol.com/bulletins/eric-schmidt-youtube-criticism>.

28 ⁸⁸⁰ *Id.*

1 714. A group of design experts and computer scientists created YouTube and launched
2 the platform for public use in December 2005.

3 715. Technology behemoth Google quickly recognized YouTube’s huge profit potential.
4 In 2006, just a year after YouTube’s launch, Google acquired YouTube for more than \$1.65
5 billion in Google stock. At the time, Google’s acquisition of YouTube was one of the largest-ever
6 tech acquisitions.

7 716. YouTube primarily generates revenue by selling advertising. The more people who
8 use YouTube and spend time on the site, the more ads YouTube can sell.⁸⁸¹ The ads are then
9 embedded or placed within the endless stream of videos recommended to the user by YouTube’s
10 algorithm.

11 717. By 2012, YouTube users were watching close to four billion hours of video every
12 month. Yet, the average YouTube user spent just fifteen minutes daily engaged with the
13 platform.⁸⁸² Users “were coming to YouTube when they knew what they were coming to look
14 for[.]”⁸⁸³ They employed the platform to identify and watch certain videos, and then they were
15 done.

16 718. To drive greater revenue, “YouTube . . . set a company-wide objective to reach one
17 billion hours of viewing a day[.]”⁸⁸⁴

18 719. As Susan Wojcicki, YouTube’s CEO explained, the goal of a “billion hours of daily
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21 ⁸⁸¹ Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,
22 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant> [<https://perma.cc/2RTW-XYVB>].

23 ⁸⁸² John Seabrook, *Streaming Dreams*, New Yorker (Jan. 8, 2012), <https://www.newyorker.com/magazine/2012/01/16/streaming-dreams> [<https://perma.cc/38VD-MGEM>].

24 ⁸⁸³ Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),
25 <https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed>.

26 ⁸⁸⁴ Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,
27 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant> [<https://perma.cc/2RTW-XYVB>].
28

1 watch time gave our tech people a North Star.”⁸⁸⁵

2 720. Google decided that “the best way to keep eyes on the site” was to introduce a
3 feature that would “[recommend] videos, [that were playing] or after one was finished[.]”⁸⁸⁶

4 721. That new platform feature uses a recommendation algorithm to identify and push
5 additional videos to users, which YouTube plays automatically through a feature called
6 “autoplay.” Autoplay begins the next video as soon as the previous video ends, creating a constant
7 stream to keep users watching.

8 722. Google’s design changes worked. Today, YouTube “has over 2 billion monthly
9 logged-in users.”⁸⁸⁷ And that 2 billion figure does not capture all platform usage because
10 YouTube, by design, allows users to consume videos without logging in or registering an account.

11 **2. Google intentionally encourages youth to use YouTube and then leverages that**
12 **use to increase revenue.**

13 723. Google knows that children and teenagers use YouTube in greater proportions than
14 older demographics. YouTube now ranks as the world’s most popular social media platform for
15 minors. According to one recent report, more than 95% of children ages 13–17 have used
16 YouTube.⁸⁸⁸ Nearly 20% of U.S. teens use YouTube “almost constantly.”⁸⁸⁹ Among U.S.
17 teenagers who regularly use social media, 32% “wouldn’t want to live without” YouTube.⁸⁹⁰

18 724. Rather than ensuring minors are not inappropriately or excessively using YouTube,
19 Google has sought to dominate their attention.

21 ⁸⁸⁵ *Id.*

22 ⁸⁸⁶ *Id.*

23 ⁸⁸⁷ *Must-Know Youtube Channel Statistics [Latest Report]*, Gitnux (Oct. 31, 2023),
<https://blog.gitnux.com/youtube-channel-statistics/>.

24 ⁸⁸⁸ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
25 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

26 ⁸⁸⁹ *Id.*

27 ⁸⁹⁰ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31,
Common Sense Media (2022), [https://www.common Sense Media.org/sites/default/files/
28 research/report/8-18-census-integrated-report-final-web_0.pdf](https://www.common Sense Media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf).

1 725. YouTube’s age controls are ineffective (or non-existent, since registration is not
2 required). In addition, Google has developed and marketed a version of YouTube, YouTube Kids,
3 explicitly targeted at children under 13. Google developed this platform to encourage early—and
4 therefore lasting—adoption of YouTube by children.

5 726. Google knows that a robust and committed base of young users is key to maximizing
6 advertising revenue. Indeed, it has aggressively touted its hold on child users to advertisers.

7 727. In 2014, for example, Google pitched its YouTube platform to Hasbro, a popular toy
8 manufacturer, and specifically boasted of the platform’s immense popularity among children,
9 noting that it was “unanimously voted as the favorite website of kids 2-12” and that “93% of
10 tweens” use the platform.⁸⁹¹

11 728. In 2015, Google gave a similar presentation to toy manufacturer Mattel, the maker of
12 Barbie and other popular kids’ toys, highlighting children’s widespread use of YouTube to
13 persuade Mattel to display digital ads on the site.⁸⁹²

14 729. The FTC has aptly summarized Google’s pitch to advertisers concerning the value of
15 its youth user base.⁸⁹³ For example, Google boasted that “YouTube is today’s leader in reaching
16 children aged 6-11[;] . . . the new ‘Saturday Morning Cartoons’[;] . . . and the #1 website regularly
17 visited by kids[.]”⁸⁹⁴

18 730. Many of YouTube’s most-viewed videos are kid-focused, and the most subscribed
19 and highest paid YouTubers are children. With over 13 billion views, *Baby Shark Dance*, a video
20

21 ⁸⁹¹ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief at 8, *FTC v.*
22 *Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3,
https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_complaint.pdf.

23 ⁸⁹² *Id.* at 8.

24 ⁸⁹³ *Google and YouTube Will Pay Record \$170 Million for Alleged Violations of Children’s Privacy*
25 *Law*, FTC (Sept. 4, 2019), [https://www.ftc.gov/news-events/news/press-releases/2019/09/google-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)
26 [youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law) (“YouTube touted
its popularity with children to prospective corporate clients,” said FTC Chairman Joe Simons.”).

27 ⁸⁹⁴ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief at 8, *FTC v.*
28 *Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3,
https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_complaint.pdf.

1 aimed at toddlers, is the most viewed video in the history of YouTube—and it and five other
2 child-focused videos make up the top ten YouTube videos of all time.⁸⁹⁵ Child creators also
3 dominate top-earner lists year after year. Ryan Kaji of Ryan’s World (f/k/a Ryan ToysReview), a
4 channel featuring now 12-year-old Ryan Kaji unboxing children’s toys, has been among
5 YouTube’s Top 10 most-subscribed channels in the United States since 2016.⁸⁹⁶ Ryan started
6 Ryan’s World in 2015 when he was only 3. By 2017, his videos had over 8 billion views, and by
7 2018, he was the highest-earning YouTuber in the world.⁸⁹⁷

8 731. As with other Defendants, once Google lures children in, it then mines them (and all
9 other users) for a breathtaking amount of data. Google’s current privacy policy, which includes
10 the YouTube platform’s data collection, reveals how sweeping this data collection is. It states that
11 Google tracks:

12 [I]nformation about the apps, browsers, and devices you use to access Google
13 services . . . includ[ing] unique identifiers, browser type and settings, device type and
14 settings, operating system, mobile network information including carrier name and
15 phone number, and application version number. We also collect information about the
16 interaction of your apps, browsers, and devices with our services, including IP
17 address, crash reports, system activity, and the date, time, and referrer URL of your
18 request.

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18 ⁸⁹⁵ *Most Viewed Videos of All Time (Over 700M views)*, YouTube,
19 https://www.youtube.com/playlist?list=PLirAqAtl_h2r5g8xGajEwdXd3x1sZh8hC.

20 ⁸⁹⁶ Madeline Berg, *The Highest-Paid YouTube Stars of 2019: The Kids Are Killing It*, Forbes (Dec.
21 18, 2019), <https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-of-2019-the-kids-are-killing-it/?sh=4c3df9a438cd> [<https://perma.cc/QE8N-6UCX>]; Madeline Berg, *The Highest-Paid YouTube Stars 2017: Gamer DanTDM Takes The Crown With \$16.5 Million*, Forbes
22 (Dec. 7, 2017), <https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979>
23 [<https://perma.cc/RXV4-37ZZ>].

24 ⁸⁹⁷ Madeline Berg, *The Highest-Paid YouTube Stars 2017: Gamer DanTDM Takes The Crown With \$16.5 Million*, Forbes (Dec. 7, 2017), <https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979> [<https://perma.cc/RXV4-37ZZ>]; Natalie Robehmed & Madeline Berg, *Highest-Paid YouTube Stars 2018: Markiplier, Jake Paul, PewDiePie And More*, Forbes (Dec. 3,
25 2018), <https://www.forbes.com/sites/natalierobehmed/2018/12/03/highest-paid-youtube-stars-2018-markiplier-jake-paul-pewdiepie-and-more/?sh=7d909c3f909a> [<https://perma.cc/V4TK-87GV>].
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1 [Y]our activity in our services . . . includ[ing]: Terms you search for[;] Videos you
2 watch[;] Views and interactions with content and ads[;] Voice and audio
3 information[;] Purchase activity[;] People with whom you communicate or share
4 content[;] Activity on third-party sites and apps that use our services[;] [and] Chrome
5 browsing history you’ve synced with your Google Account.

6 ***

7 “Your location [information including]: GPS and other sensor data from your
8 device[;] IP address[;] Activity on Google services, such as your searches and places
9 you label like home or work[;] [and] Information about things near your device, such
10 as Wi-Fi access points, cell towers, and Bluetooth-enabled devices[.]”⁸⁹⁸

11 732. Google’s privacy policy also indicates that, like other Defendants, it may also collect
12 data about its users from data brokers, which it euphemistically refers to as “trusted partners” or
13 “marketing partners.”⁸⁹⁹

14 733. As with other Defendants, YouTube’s collection and analysis of user data allows it
15 to assemble virtual dossiers on its users, covering hundreds if not thousands of user-specific data
16 segments. This, in turn, allows advertisers to micro-target marketing and advertising dollars to
17 very specific categories of users, who can be segregated into pools or lists using YouTube’s data
18 segments. Advertisers purchase ad real estate space on users’ feeds, which allow them to place the
19 right ads in front of these micro-targeted segments of users—including children, both in the main
20 YouTube frame and in the YouTube Kids platform. Only a fraction of these data segments come
21 from material knowingly designated by users for publication or explicitly provided by users in
22 their account profiles. Instead, many of these data segments are collected by YouTube through
23 surveillance of each user’s activity while using the platform and even when logged off the
24 platform.⁹⁰⁰

25 734. As with Meta, Google’s data policy does not inform users that the more time
26 individuals spend using YouTube, the more ads Google can deliver and the more money it can

27 ⁸⁹⁸ *Information Google collects: Google Privacy Policy*, Google, <https://policies.google.com/privacy?hl=en#infocollect>.

28 ⁸⁹⁹ *Id.*

⁹⁰⁰ *About Targeting for Video Campaigns*, Google, <https://support.google.com/youtube/answer/2454017?hl=en>.

1 make, or that the more time users spend on YouTube, the more YouTube learns about them, and
2 the more it can sell to advertisers the ability to micro-target highly personalized ads.

3 735. Google’s secret virtual dossiers on its users, including child users, fuel its
4 algorithms. The company relies on this data—including data plainly reflecting use by children—to
5 train its algorithms. A Google engineer explained in a 2014 presentation:

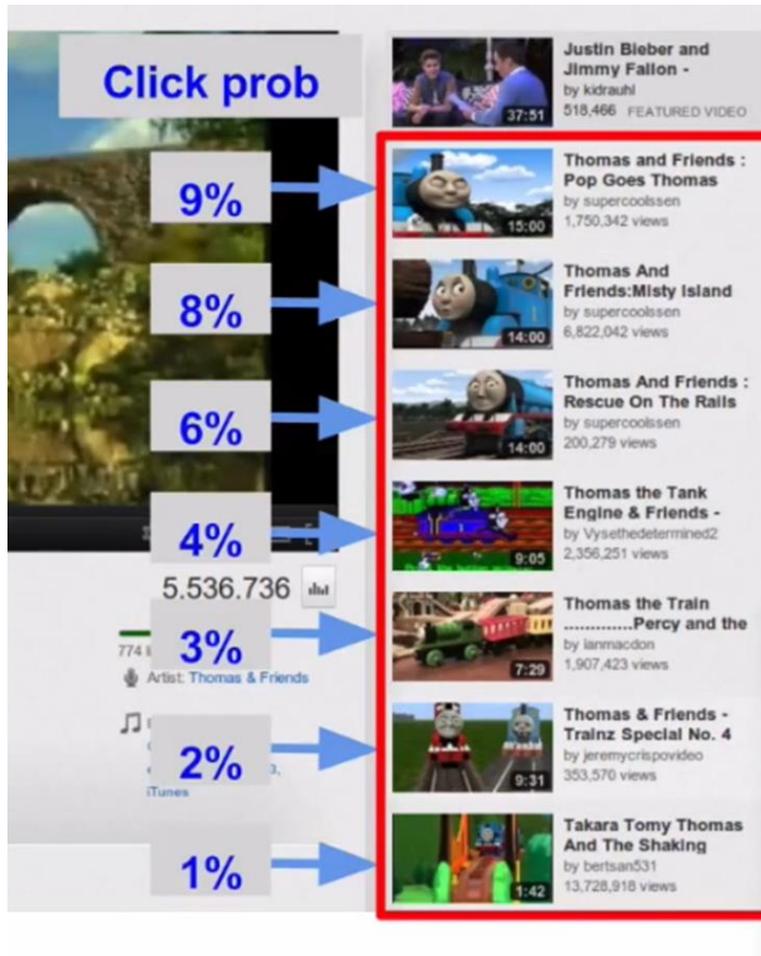
6 What do I mean by a training example? It’s a single-user experience. On YouTube,
7 perhaps it’s that one [Thomas the Tank Engine] webpage my son saw six months ago,
8 along with all the recommendations that we showed him. We also record the outcome
9 to know whether the recommendations we made are good or whether they’re bad.
That’s a single training exercise. On a large property, you can easily get into hundreds
of billions of these.⁹⁰¹

10 The engineer illustrated this with a slide, excerpted below, presenting how algorithmic analysis both
11 structured the format of recommendations of Thomas the Tank Engine YouTube videos and
12 provided information to inform algorithmic training through user engagement.⁹⁰²

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26 ⁹⁰¹ Alex Woodie, *Inside Sibyl, Google’s Massively Parallel Machine Learning Platform*, Datanami
27 (July 17, 2014), [https://www.datanami.com/2014/07/17/inside-sibyl-googles-massively-parallel-
machine-learning-platform/](https://www.datanami.com/2014/07/17/inside-sibyl-googles-massively-parallel-machine-learning-platform/).

28 ⁹⁰² *Id.*

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736. Through these and other efforts, YouTube has delivered massive amounts of advertising revenue to Google. In 2021 alone, YouTube generated about \$29 billion in revenue selling ads on its site.⁹⁰³

3. Google intentionally designed platform features to addict children and adolescents.

737. Google devised and continues to employ interrelated platform features to increase usage and maximize engagement by teenagers and children. Simply put, YouTube’s platform

⁹⁰³ Andrew Hutchinson, *YouTube Generated \$28.8 Billion in Ad Revenue in 2021, Fueling the Creator Economy*, Soc. Media Today (Feb. 2, 2022), <https://www.socialmediatoday.com/news/youtube-generated-288-billion-in-ad-revenue-in-2021-fueling-the-creator/618208/>; Jennifer Elias, *YouTube is a media juggernaut that could soon equal Netflix in revenue*, CNBC (Apr. 27, 2021), <https://www.cnbc.com/2021/04/27/youtube-could-soon-equal-netflix-in-revenue.html>.

1 features are engineered to induce excessive use and to addict adolescents and children to the
2 platform.

3 **a. Google’s age-verification measures and parental controls are ineffective.**

4 738. Google’s strategy to entrench minor users begins with access. The company purports
5 to impose a minimum age requirement and claims to verify the age of its users. But those features
6 are ineffective, as they do little to prevent children and teenagers from using the platform.

7 739. Anyone with access to the Internet, regardless of age, can use YouTube and access
8 every video available through the platform without registering an account or verifying their age.
9 YouTube does not even ask for age information before allowing users to consume YouTube
10 videos.

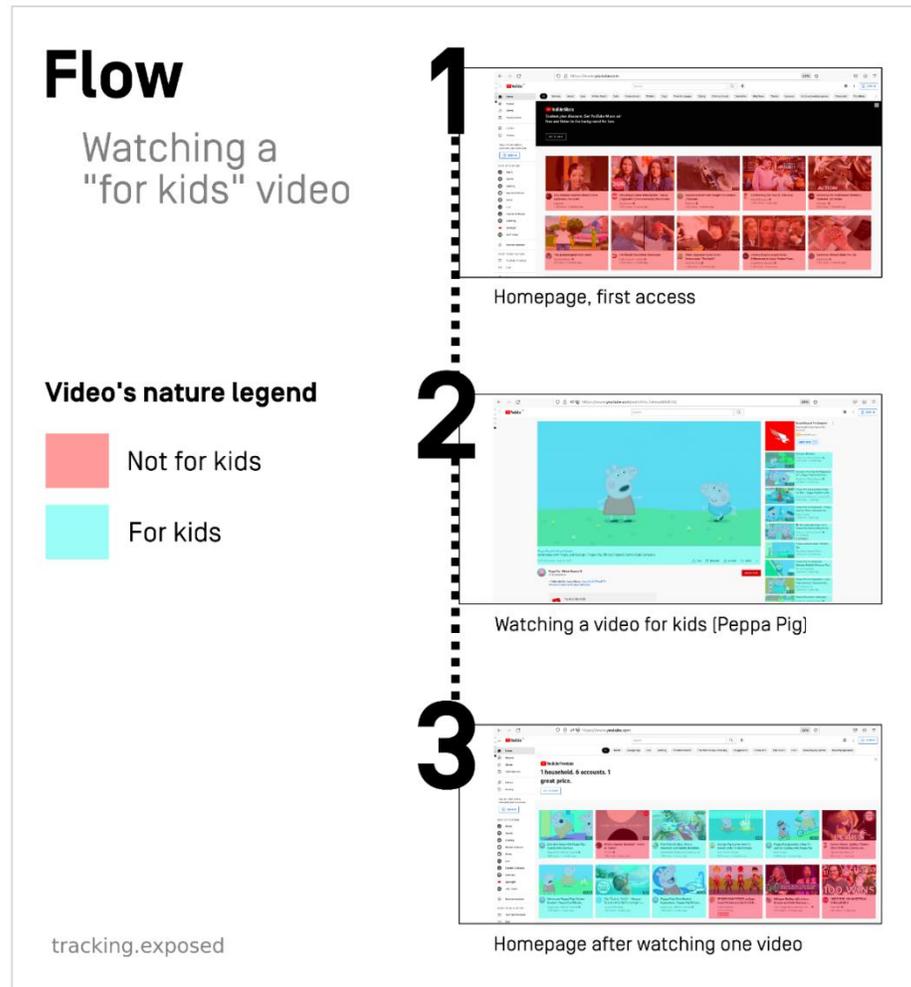
11 740. A user needs an account to post videos or like (or comment) on videos. But to get
12 one, a user needs only enter a valid email address and a birthday. Google does nothing to verify
13 the birthday entered by users in the U.S.—and the platform freely permits users to change their
14 birthdays in their account settings after creating an account.

15 741. YouTube’s ineffective age verification feature means that Google fails to protect
16 children from other platform features discussed below that Google knows to be harmful to kids.

17 742. For example, for users 13–17 years old, Google claims to disable YouTube’s
18 autoplay feature. However, that measure is virtually meaningless because children can use
19 YouTube without logging into any account or by logging in but misreporting their age.

20 743. Even if children use YouTube Kids, that platform contains many of the same
21 problems YouTube does, including a harmful, manipulative algorithm, as discussed below.
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1 744. Google cannot credibly claim that it is unaware of the fact and extent of youth usage
2 of YouTube. Google’s system can “identify children as being much younger than 13[.]”⁹⁰⁴
3 According to *Tracking Exposed*, YouTube can rapidly identify a user as a child.⁹⁰⁵



21 745. Google engineers have publicly admitted YouTube’s algorithm tracks user age. As
22 Google engineers outlined in a 2016 paper on YouTube’s recommendation system:

23 Demographic features are important for providing priors so that the recommendations
24 behave reasonably for new users. The user’s geographic region and device are
25 embedded and concatenated. Simple binary and continuous features such as the user’s

26 ⁹⁰⁴ *Tracking Exposed Special Report: Non-logged-in children using YouTube at 6, 19*, Tracking
27 Exposed (July 1, 2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

28 ⁹⁰⁵ *Id.* at 15, 18.

1 gender, logged-in state and age are input directly into the network as real values
2 normalized to [0, 1].⁹⁰⁶

3 746. The *Tracking Exposed Special Report* indicates that there is “strong evidence” that
4 Google’s systems continue to refine and develop a more precise estimate for under 18 users, but
5 the platform does not “redirect them to YouTube Kids.”⁹⁰⁷

6 **b. YouTube is designed to inundate users with features that use intermittent
7 variable rewards and reciprocity.**

8 747. Google uses a series of interrelated design features that exploit known mental
9 processes to induce YouTube’s users to use the platform more frequently, for more extended
10 periods, and with more intensity (i.e., providing more comments and likes). Google knows
11 children and adolescents, whose brains are still developing, are particularly susceptible to these
12 addictive features.

13 748. Google designed its YouTube platform so that when children and teenagers use it,
14 they are inundated with interface design features specifically designed to dominate their attention
15 and encourage excessive use. Every aspect of how YouTube presents the format of a given page
16 with a video is structured to ensure unimpeded viewing of the videos, alongside Download, Like,
17 and Share buttons, plus recommendations for more videos to watch. The organization of these
18 features is carefully calibrated to adjust to the space constraints of a user’s device, such that
19 minimal effort is needed to watch a video unimpeded. YouTube even has an ambient mode that
20 uses dynamic color sampling so that the YouTube platform adapts to the video being watched and
21 the user is not distracted by the video’s borders.⁹⁰⁸

22 749. Like the other Defendants, Google has designed YouTube with features that exploit
23 neuropsychology to maximize the time users (including children) spend using the platform.

24 ⁹⁰⁶ Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, 2016 Proc. of the
25 10th ACM Conf. on Recommender Sys. 191–196, 193, <https://dl.acm.org/doi/pdf/10.1145/2959100.2959190>.

26 ⁹⁰⁷ *Tracking Exposed Special Report: Non-logged-in children using YouTube* at 6,19, Tracking
Exposed (July 1, 2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

27 ⁹⁰⁸ Abner Li, *YouTube rolling out black dark theme, ‘Ambient Mode,’ and other video player
28 updates*, 9To5Google (Oct. 24, 2022), <https://9to5google.com/2022/10/24/youtube-ambient-mode/>.

1 750. IVR features, such as notifications and Likes, compel YouTube creators and
2 consumers, particularly children, to use the platform habitually and excessively. For example, in
3 order to create and upload videos to YouTube, a user under 13 may submit a fictitious birthdate to
4 gain access to posting privileges. Once the young user has a logged-in account, they can receive
5 notifications and Likes. For example, the logged in user can subscribe to various YouTube
6 channels, which in turn will send them notifications from various channels they follow. Similarly,
7 young creators who upload videos to YouTube can track the Likes received by the video. These
8 features psychologically reward creators who upload videos to YouTube. As explained above,
9 receiving a “Like” shows others’ approval and activates the brain’s reward region.⁹⁰⁹ Thus, users’
10 ability to Like videos encourages creators to use the platform compulsively, seeking additional
11 pleasurable experiences.

12 751. Google engineers also deploy strategies to induce “flow” state among users of
13 YouTube, which, as described above, is dangerous to children because it induces excessive use
14 and poses a risk of addiction, compulsive use, and sleep deprivation.

15 752. YouTube uses two design features that induce flow state. The first is its panel of
16 recommended videos. YouTube recommends videos both on the home page and on each video
17 page in the “Up Next” panel.⁹¹⁰ This panel pushes an endless stream of videos that YouTube’s
18 algorithm selects and “suggests” to keep users watching by teasing a pipeline of upcoming videos.

19 753. The second feature is Autoplay, which complements the Up Next panel and
20 seamlessly takes users through the list of upcoming videos without users having to affirmatively
21 click on or search for other videos. This constant video stream—comprised of videos
22 recommended by YouTube’s algorithm—is the primary way Google increases the time users
23 spend using its platform. This endless video succession induces users to enter a flow state of

24 ⁹⁰⁹ See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer*
25 *Influence on Neural and Behavioral Responses to Social Media*, 27(7) *Ass’n Psych. Sci.* 1027–1035,
26 (2016), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf)
26 [10.1177_0956797616645673.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf).

27 ⁹¹⁰ *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/)
28 [features/recommendations/](https://www.youtube.com/howyoutubeworks/product-features/recommendations/).

1 consumption, which is particularly dangerous for children.

2 754. In an April 2021 letter to YouTube CEO Susan Wojcicki, the House Committee on
3 Oversight and Reform criticized the Autoplay feature:

4 This places the onus on the child to stop their viewing activity, rather than providing a
5 natural break or end point. Without that natural stopping point, children are likely to
6 continue watching for long periods of time.⁹¹¹

7 755. This is particularly acute for Google’s recently launched YouTube Shorts. YouTube
8 Shorts enables users to create short videos up to 60 seconds in length, in a full-screen format
9 popularized by TikTok and copied by Instagram Reels. As in Reels and TikTok, Shorts are
10 presented in an algorithmically generated feed; users can watch new videos by swiping up on their
11 smartphones. Instead of presenting videos chronologically, they are organized in a manner to drive
12 the most watch time, as dictated by the algorithm. Indeed, Google hired TikTok’s North American
13 head, Kevin Ferguson, and other TikTok engineers to develop YouTube Shorts.⁹¹²

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24 ⁹¹¹ Letter from Raja Krishnamoorthi, H. Rep., Chairman, Subcomm. on Econ. & Consumer Pol’y, to
25 Susan Wojcicki, CEO, YouTube at 4–5 (Apr. 6, 2021),
26 <https://oversightdemocrats.house.gov/sites/democrats.oversight.house.gov/files/2021-04-06.RK%20to%20Wojcicki-YouTube%20re%20YouTube%20Kids%20Content.pdf>.

27 ⁹¹² Richard Nieva, *In the Age of TikTok, YouTube Shorts Is a Platform in Limbo*, Forbes (Dec. 20,
28 2022), <https://www.forbes.com/sites/richardnieva/2022/12/20/youtube-shorts-monetization-multiformat/> [<https://perma.cc/9GSC-WSSE>].

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756. An important target audience for YouTube Shorts is children. For example, YouTube Shorts features videos, such as child “influencers,” that appeals to children. YouTube Shorts contains dangerous features similar to other Defendants’ short form platforms, including the ability to scroll continuously through YouTube Shorts, inducing a “flow-state” that distorts users’ sense of time and facilitates extended use, and dangerous exploitation of “social comparison” techniques by promoting misleadingly idealized portrayals from influencers and others who are rewarded for posting popular material.

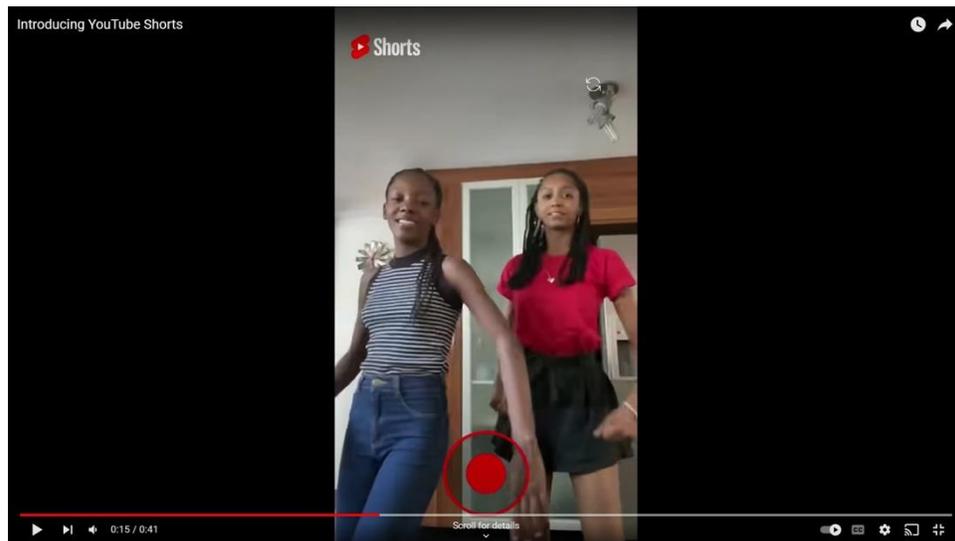
757. Almost immediately upon launch, Google began marketing YouTube Shorts to children. For example, Google launched an advertisement featuring images of children and teenagers (like in the screenshot below) engaging with the YouTube Shorts platform.⁹¹³

758. Similarly, another advertisement for Shorts explains how creators on YouTube can keep revenue generated by their Shorts’ viewership, while an image of a video creator young enough to be in braces appears on screen.⁹¹⁴

⁹¹³ *Made on YouTube: New ways to join YPP, Shorts Monetization & Creator Music*, YouTube (Sept. 20, 2022), <https://www.youtube.com/watch?v=h6TrvCV3NdU>.

⁹¹⁴ *Introducing YouTube Shorts*, YouTube (Aug. 27, 2021), <https://www.youtube.com/watch?v=J38Yq85ZoyY>.

1 759. Shorts is one of YouTube’s interrelated design features that exploit known mental
2 processes to induce YouTube users to use the platform more frequently, for more extended
3 periods, and with more intensity, i.e., providing more comments and Likes. Not surprisingly,
4 given its copycat origin, the issues with Shorts replicate the issues with TikTok and Instagram
5 Reels, discussed above. Google knows or should have known that children, whose brains are still
6 developing, are particularly susceptible to such addictive features.



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18 760. YouTube has monetized users’ susceptibility to IVR by allowing creators who obtain
19 more than a thousand subscribers with four-thousand valid public watch hours to qualify for the
20 YouTube Partner Program. Once a creator obtains this elite status, they are rewarded with “Super
21 Chat” and “Super Stickers”—special images or distinct messages that other users can purchase
22 and place on a creator’s channel.⁹¹⁵ Paid messages, including the amount donated, are visible to all
23 users. And the more a user pays for these promotions, the more prominent and longer the image is
24 displayed. Both features are intended to allow a user to show support for, or connect with, their
25 favorite YouTube creators. Similar to the “Likes” feature, this paid support activates the reward
26

27 ⁹¹⁵ *How to Make Money on YouTube: YouTube Partner Program*, YouTube,
28 https://www.youtube.com/intl/en_us/creators/how-things-work/video-monetization/.

1 center of the creator’s brain and releases dopamine while the creator is generating revenue for
2 YouTube.

3 **c. Google’s algorithms are designed to maximize “watch time.”**

4 761. Google engineers algorithms to recommend videos to YouTube users.

5 762. YouTube began building its algorithms in 2008.⁹¹⁶ Its goal was to maximize how
6 long users spent watching YouTube videos.⁹¹⁷

7 763. These algorithms select videos that populate the YouTube homepage, rank results in
8 user searches, and push videos for viewers to watch through the “Up Next” feature.

9 764. YouTube designed its algorithms to manipulate users and induce them to use
10 YouTube excessively.

11 765. A former YouTube engineer explained that when he designed YouTube’s algorithm,
12 YouTube wanted to optimize for one key metric, “watch time.”⁹¹⁸ The engineer elaborated that
13 “[i]ncreasing users’ watch time is good for YouTube’s business model” because it increases
14 advertising revenue.⁹¹⁹

15 766. In 2012, the YouTube Head of Content Creator Communications similarly
16 explained: “When we suggest videos, we focus on those that increase the amount of time that the
17 viewer will spend watching videos on YouTube, not only on the next view, but also successive
18 views thereafter.”⁹²⁰

19 767. The current algorithm uses deep-learning neural networks, a type of software that

20 ⁹¹⁶ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
21 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

22 ⁹¹⁷ Ben Popken, *As algorithms take over, YouTube’s recommendations highlight a human problem*,
23 NBC News (Apr. 19, 2018), <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596>.

24 ⁹¹⁸ William Turton, *How YouTube’s algorithm prioritizes conspiracy theories*, Vice (Mar. 5, 2018),
<https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories>.

25 ⁹¹⁹ Jesselyn Cook & Sebastian Murdock, *YouTube Is a Pedophile’s Paradise*, Huffington Post (Mar.
26 21, 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db.

27 ⁹²⁰ Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),
28 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

1 returns outputs based on data fed into it.⁹²¹ The VP of Engineering at YouTube explained:

2 To provide such custom curation, our recommendation system doesn't operate off of
3 a "recipe book" of what to do. It's constantly evolving, learning every day from over
4 80 billion pieces of information we call signals. That's why providing more
5 transparency isn't as simple as listing a formula for recommendations, but involves
6 understanding all the data that feeds into our system. A number of signals build on
7 each other to help inform our system about what you find satisfying: clicks,
8 watchtime, survey responses, sharing, likes, and dislikes.⁹²²

9 768. YouTube's algorithm may also "use data from your Google Account activity to
10 influence your recommendations[.]"⁹²³

11 769. The algorithm "develops dynamically" to predict which posts will hold the user's
12 attention.⁹²⁴ That is, it can also determine which "signals" are more important to individual users.
13 For example, if a user shares every video they watch, including those they rate low, the algorithm
14 learns to discount the significance of the user's shares when recommending videos.⁹²⁵

15 770. Besides the algorithm's self-learning capability, Google also consistently refines the
16 algorithm, updating it "multiple times a month[.]"⁹²⁶

17 771. In 2017, the former technical lead for YouTube recommendations explained that
18 "one of the key things [the algorithm] does is it's able to generalize[.]"⁹²⁷ While older iterations

19 ⁹²¹ Alexis C. Madrigal, *How YouTube's Algorithm Really Works*, Atl. (Nov. 8, 2018),
20 <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/> [<https://perma.cc/3UHM-HAY9>]; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, 2016 Proc. of the 10th ACM Conf. on Recommender Sys. 191–196,
21 <https://dl.acm.org/doi/pdf/10.1145/2959100.2959190>.

22 ⁹²² Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
23 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

24 ⁹²³ *Manage your recommendations & search results*, Google,
25 <https://support.google.com/youtube/answer/6342839?hl=en&co=GENIE.Platform%3DAndroid>.

26 ⁹²⁴ Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
27 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

28 ⁹²⁵ *Id.*

⁹²⁶ Nilay Patel, *YouTube chief product officer Neal Mohan on the algorithm, monetization, and the future for creators*, Verge (Aug. 3, 2021), <https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>.

⁹²⁷ Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),
<https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video->
(footnote continued)

1 “were pretty good at saying, here’s another [video] just like” ones the user had watched, by 2017,
2 the algorithm could discern “patterns that are less obvious[,]” identifying “adjacent relationships”
3 of “similar but not exactly the same” videos.⁹²⁸

4 772. Over time, the algorithm became increasingly successful in getting users to watch
5 recommended videos. By 2018, YouTube Chief Product Officer Neal Mohan said that the
6 YouTube algorithm was responsible for more than 70% of users’ time using the platform.⁹²⁹ That
7 is, more than 70% of the time users spend on YouTube was from recommendations Google’s
8 algorithm pushed to them rather than videos identified by users through independent searches.

9 773. The algorithm also keeps users watching for longer periods. For instance, Mohan
10 explained that mobile device users watch for more than 60 minutes on average per session
11 “because of what our recommendations engines are putting in front of [them].”⁹³⁰

12 774. The algorithm is particularly effective at addicting teenagers to the platform. In
13 2022, *Pew Research Center* found that “[a]bout three-quarters of teens visit YouTube at least
14 daily, including 19% who report using the site or app almost constantly.”⁹³¹

15 775. A software engineer explained that the algorithm is “an addiction engine[.]”⁹³² He
16 raised concerns with YouTube staff, who said they had no intention to change the algorithms.
17 After all, the engineer explained, the algorithm works as intended, “it makes a lot of money.”⁹³³

18 776. Because users watch more than one billion hours of YouTube videos daily and
19 approximately 70% of the time is spent on videos pushed to users by YouTube’s

20 recommendation-personalized-feed.

21 ⁹²⁸ *Id.*

22 ⁹²⁹ Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan.
10, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

23 ⁹³⁰ *Id.*

24 ⁹³¹ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
25 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

26 ⁹³² Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,
Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant> [<https://perma.cc/2RTW-XYVB>].

27 ⁹³³ *Id.*

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1 “recommendation engines[,]” Google’s algorithms are responsible for hundreds of millions of
2 hours users spend watching videos on YouTube each day.⁹³⁴

3 777. Google’s “recommendation engines” are designed to prioritize the distribution of
4 videos that are more likely to be addictive and more likely to lead to harm. For example, “fear-
5 inducing videos cause the brain to receive a small amount of dopamine,” which acts as a reward
6 and creates a desire to do something over and over.⁹³⁵ That dopaminergic response makes it more
7 likely that a user will watch the harmful video, which the algorithm interprets as signaling interest
8 and preference. Former Google engineers told *The Wall Street Journal* that “[t]he algorithm
9 doesn’t seek out extreme videos . . . but looks for clips that data show are already drawing high
10 traffic and keeping people on the site. Those videos often tend to be sensationalist.”⁹³⁶ An
11 investigation by *Bloomberg* put it simply: “[I]n the race to one billion hours, a formula emerged:
12 Outrage equals attention.”⁹³⁷

13 778. Google’s algorithm pushes users down “rabbit hole[s],” addicting them to YouTube
14 and keeping them on the platform for longer.⁹³⁸

15 779. YouTube’s “recommendation engines” create a vicious cycle in its ruthless quest to
16 grow view time. Users who get pushed down rabbit holes then become *models* for the algorithm.

18 ⁹³⁴ See Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET
19 (Jan. 10, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

20 ⁹³⁵ Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC
21 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
22 [young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

23 ⁹³⁶ *Why is YouTube Suggesting Extreme and Misleading Content*, YouTube (Feb. 7, 2018),
24 <https://www.youtube.com/watch?v=7AjA3Df6i6o>; see also Josephine Bila, *YouTube’s Dark Side*
25 *Could be Affecting Your Child’s Mental Health*, CNBC (Feb. 13, 2018),
26 [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
27 [children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

28 ⁹³⁷ Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,
29 *Bloomberg* (Apr. 2, 2019), [https://www.bloomberg.com/news/features/2019-04-02/youtube-](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant)
30 [executives-ignored-warnings-letting-toxic-videos-run-rampant](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant) [<https://perma.cc/2RTW-XYVB>].

31 ⁹³⁸ Max Fisher & Amanda Taub, *On YouTube’s Digital Playground, an Open Gate for Pedophiles*,
32 *N.Y. Times* (June 3, 2019), [https://www.nytimes.com/2019/06/03/world/americas/youtube-](https://www.nytimes.com/2019/06/03/world/americas/youtube-pedophiles.html)
33 [pedophiles.html](https://www.nytimes.com/2019/06/03/world/americas/youtube-pedophiles.html) [<https://perma.cc/47KY-RJ8L>].

1 And the algorithm consequently emphasizes keeping youth on the platform for as long as possible,
2 it applies these patterns to more and more users. That is, because Google designed the algorithm
3 to “maximize engagement,” uncommonly engaged users become “models to be reproduced.”⁹³⁹

4 780. In 2021, the Mozilla Foundation studied 37,000 YouTube users, finding that 71% of
5 all reported negative user experiences came from videos recommended to users by Google’s
6 algorithm.⁹⁴⁰ And users were 40% more likely to report a negative experience from a video
7 recommended by YouTube’s algorithm than from one they searched for.⁹⁴¹ Importantly, videos
8 that elicited those negative experiences “acquired 70% more views per day than other videos
9 watched by [study] volunteers.”⁹⁴²

10 781. These problems combine to compel children and teenagers to overuse a platform that
11 adversely affects their mental health. Mental health experts have warned that YouTube is a
12 growing source of anxiety⁹⁴³ Natasha Daniels, a child psychotherapist, has also seen increased
13 rates of anxiety among children using YouTube. And because of that anxiety, those children
14 “exhibit loss of appetite, sleeplessness, crying fits and fear.”⁹⁴⁴ Ultimately, she says, “YouTube is
15 an ongoing conversation in my therapy practice, which indicates there’s a problem[.]”⁹⁴⁵

16 782. One study determined that using Google’s platform was “consistently and negatively
17 related to sleep outcomes.”⁹⁴⁶ Specifically, for every 15 minutes teens spent using YouTube, they

18 ⁹³⁹ Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (July 13, 2019),
19 <https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>
20 [<https://perma.cc/V76L-MCUY>].

21 ⁹⁴⁰ *YouTube Regrets: A crowdsourced investigation into YouTube’s recommendation algorithm* at
22 13, Mozilla Found. (July 2021),
https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf.

23 ⁹⁴¹ *Id.* at 3.

24 ⁹⁴² *Id.* at 13.

25 ⁹⁴³ Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC
(Feb. 13, 2018), [https://www.cnn.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-](https://www.cnn.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
26 [young-children.html](https://www.cnn.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

27 ⁹⁴⁴ *Id.*

28 ⁹⁴⁵ *Id.*

⁹⁴⁶ Meg Pillion *et al.*, *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and*
(footnote continued)

1 were 24% less likely to get seven hours of sleep. According to Dr. Alon Avidan, director of the
2 UCLA Sleep Disorders Center, YouTube is particularly sleep disruptive because its
3 recommendation algorithm and Autoplay feature make it “so easy to finish one video” and watch
4 the next.⁹⁴⁷ Similarly, a signal that the YouTube algorithm relied on was the “time of day” a user
5 was watching—a signal that, when used to maximize length of duration with the YouTube
6 platform, induces sleep deprivation.⁹⁴⁸

7 783. Sleep deprivation is, in turn, associated with poor health outcomes. For example,
8 “insufficient sleep negatively affects cognitive performance, mood, immune function,
9 cardiovascular risk, weight, and metabolism.”⁹⁴⁹

10 784. Compulsive YouTube use can also harm brain development. According to Donna
11 Volpitta, Ed.D, “[c]hildren who repeatedly experience stressful and/or fearful emotions may under
12 develop parts of their brain’s prefrontal cortex and frontal lobe, the parts of the brain responsible
13 for executive functions, like making conscious choices and planning ahead.”⁹⁵⁰

14 785. Google’s algorithm also promotes the creation of and pushes children towards
15 extremely dangerous “challenges”, which often garner thousands of “Likes,” adding to the

17 *sleep outcomes*, 100 *Sleep Med.* 174–182, 179 (Dec. 2022),
18 <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>
19 [<https://perma.cc/PJ5C-CTMP>].

20 ⁹⁴⁷ Cara Murez, *One App Is Especially Bad for Teens’ Sleep*, U.S. News & World Rep. (Sept. 13,
21 2022), <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

22 ⁹⁴⁸ *Recommended videos: How does YouTube’s recommendation system work?*, YouTube (July 28,
23 2023), <https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content>
24 [<https://web.archive.org/web/20230728074151/https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content>].

25 ⁹⁴⁹ Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance among young adults*, 85 *Preventive Med.* 36–41, 36 (2016),
26 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025> [<https://perma.cc/QYE5-92M4>].

27 ⁹⁵⁰ Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC
28 (Feb. 13, 2018), <https://www.cnn.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

1 pressure students feel to participate. The neurological and psychological techniques by which
2 Google, like other Defendants, fosters excessive, addictive use of YouTube in turn foster
3 “challenges”.

4 786. Even though Google knew or should have known of these risks to its youth users,
5 Google’s platform lacks any warnings that foreseeable platform use could cause these harms.

6 787. And despite all the evidence that YouTube’s design and algorithms harm millions of
7 children, Google continues to manipulate users and compel them to use the platform excessively,
8 to enhance Google’s bottom line, often resulting in significant harm.

9 **d. YouTube’s features include impediments to discontinuing use.**

10 788. As with other Defendants, Google has intentionally designed its platforms so that
11 adolescent users, including students in NYC Plaintiffs’ schools and community, face significant
12 navigational obstacles and hurdles when trying to delete or deactivate their accounts, in contrast to
13 the ease with which users can create those accounts.

14 789. *First*, because YouTube is accessible without a user needing to log in, YouTube
15 users cannot prevent themselves from being able to access YouTube by deleting their YouTube
16 account.

17 790. *Second*, YouTube accounts are linked to a user’s broader Google account. These
18 accounts are structured such that, for a user to delete a YouTube account, the user must also delete
19 the user’s entire Google account. This means that if a YouTube user uses Google’s other
20 platforms, such as the popular email service Gmail, those accounts will be lost as well. This
21 structure holds hostage user data—if a child needs to keep their email account through Google (for
22 instance, if that is a requirement of their school), they cannot delete their YouTube account, even
23 if they want to. If a user stores family photos in Google Photos, but wants to delete their YouTube
24 account, they must choose between storage for their photos or deleting their YouTube account.
25 Similarly, if a user has purchased books or movies through Google’s digital market Google Play,
26 the user’s copy of those books or movies will be deleted if the user deletes their Google account to
27 rid themselves of YouTube. Google explicitly threatens users with this consequence on the page
28 where users can delete their account, listing every associated account Google will delete and

1 providing examples of the kinds of videos that will be deleted if a user deletes their YouTube
2 account.

3 791. *Third*, Google intentionally designed its platform so that to delete a user’s Google
4 account, a user must locate and tap on six different buttons (through six different pages and
5 popups) from YouTube’s main feed to delete an account successfully. This requires navigating
6 away from YouTube and into the webpages of other Google platforms. As with Meta, users are
7 still able to recover their accounts after deletion—though unlike Meta, Google does not tell users
8 when their accounts will become unrecoverable, just that they will sometime after deletion.

9 **4. Google failed to adequately warn NYC Plaintiffs about the harm its platforms**
10 **cause or provide instructions regarding safe use.**

11 792. Since YouTube’s inception, Google has failed to adequately warn the public,
12 including NYC Plaintiffs and members of NYC Plaintiffs’ community, about the physical and
13 mental health risks its platform poses. These risks include, but are not limited to, platform abuse,
14 addiction, and compulsive use; dissociative behavior; damage to body image; social isolation;
15 impaired brain development; and a plethora of mental health disorders like body dysmorphia,
16 eating disorders, anxiety, depression, insomnia, ADD/ADHD exacerbation, suicidal ideation, self-
17 harm, and death.

18 793. Google targets adolescent users via advertising and marketing materials distributed
19 throughout digital and traditional media platforms. Its advertising and marketing campaigns fail to
20 provide adequate warnings to potential adolescent consumers of the physical and mental risks
21 associated with using YouTube.

22 794. Google further fails to adequately warn adolescents during the platform registration
23 process. At account setup, Google’s platform contains no warning labels, banners, or conspicuous
24 messaging to adequately inform adolescent users of the known risks and potential physical and
25 mental harms associated with usage of its platform. Instead, Google allows adolescents to easily
26 create an account (or multiple accounts), and to access YouTube with or without an account.

27 795. Google’s lack of adequate warnings continues once an adolescent uses YouTube.
28 Google does not adequately inform adolescent users that their data will be tracked, used to help

1 build a unique algorithmic profile, and potentially sold to Google’s advertising clients.

2 796. Google’s failure to warn adolescent users and the public continues even as
3 adolescents exhibit problematic signs of addictive, compulsive use of YouTube. Google does not
4 adequately warn users when their screen time reaches harmful levels or when adolescents are
5 accessing the platform on a habitual and uncontrolled basis.

6 797. Not only does Google fail to adequately warn users regarding the risks associated
7 with YouTube, it also does not provide adequate instructions on how adolescents can safely use its
8 platform. A reasonable and responsible company would instruct adolescents on best practices and
9 safety protocols when using a platform known to pose health risks.

10 798. As recently as February 2024, YouTube claims to have implemented new tools to
11 support teen mental health and wellbeing. These new measures include “Take a Break” reminders
12 that appear full-screen and “will have a default trigger setting for every 60 minutes.”⁹⁵¹ Similarly,
13 in November 2023 YouTube shared additional “safeguards for content recommendations for
14 teens.”⁹⁵²

15 799. Tools implemented in 2024 will not remedy prior harms suffered or damages
16 incurred by NYC Plaintiffs. Moreover, the efficacy of implemented tools by YouTube is
17 questionable. YouTube’s core business still relies on the use of algorithms and other intermittent
18 variable rewards that manipulate young users to spend as much time on the platform as possible.
19 As with Meta, it is unclear how effective these safeguards will be. Providing optional tools to
20 young users who are addicted to or dependent on the platform, and relying on their own self-
21 control to address the problems YouTube’s design features have caused, will not solve the
22 problem.

23 800. Google’s failure to properly warn and instruct adolescent users or their parents has
24 proximately caused significant harm to NYC Plaintiffs, who have expended and continue to
25 expend significant resources addressing the impact of Google’s conduct on NYC Plaintiffs’

26 ⁹⁵¹ YouTube, *Safer Internet Day: Supporting teen mental health and wellbeing on YouTube* (Feb. 6,
27 2024), <https://blog.youtube/inside-youtube/safer-internet-day-2024/>.

28 ⁹⁵² *Id.*

1 operations, including providing additional support to impacted youth.

2 **F. Youth Social Media Use and Addiction Has Disrupted this Country’s Public Schools**
3 **and Communities.**

4 **1. Defendants’ conduct has significantly disrupted the learning environment in**
5 **schools and diverted resources from other student needs.**

6 801. The widespread and compulsive use of Defendants’ platforms has consequences
7 beyond the harms to the individual users of the platforms. It has fundamentally changed the
8 learning and teaching environment in the country’s public schools—affecting students, parents,
9 teachers, administrators, coaches, counselors, and other members of local communities—and has
10 required significant additional efforts to be taken by local governments, school districts, and the
11 medical community.

12 802. A recent report published by the American Federation of Teachers, a teachers union
13 representing 1.7 million educators, along with the American Psychological Association, Design It
14 For Us, Fairplay, and Parents Together, “details how school districts across the country are
15 experiencing significant burdens as they respond to tech’s predatory and prevalent influence in the
16 classroom[.]”⁹⁵³ An article describing the report, *Likes vs. Learning: The Real Cost of Social*
17 *Media for Schools*, noted:

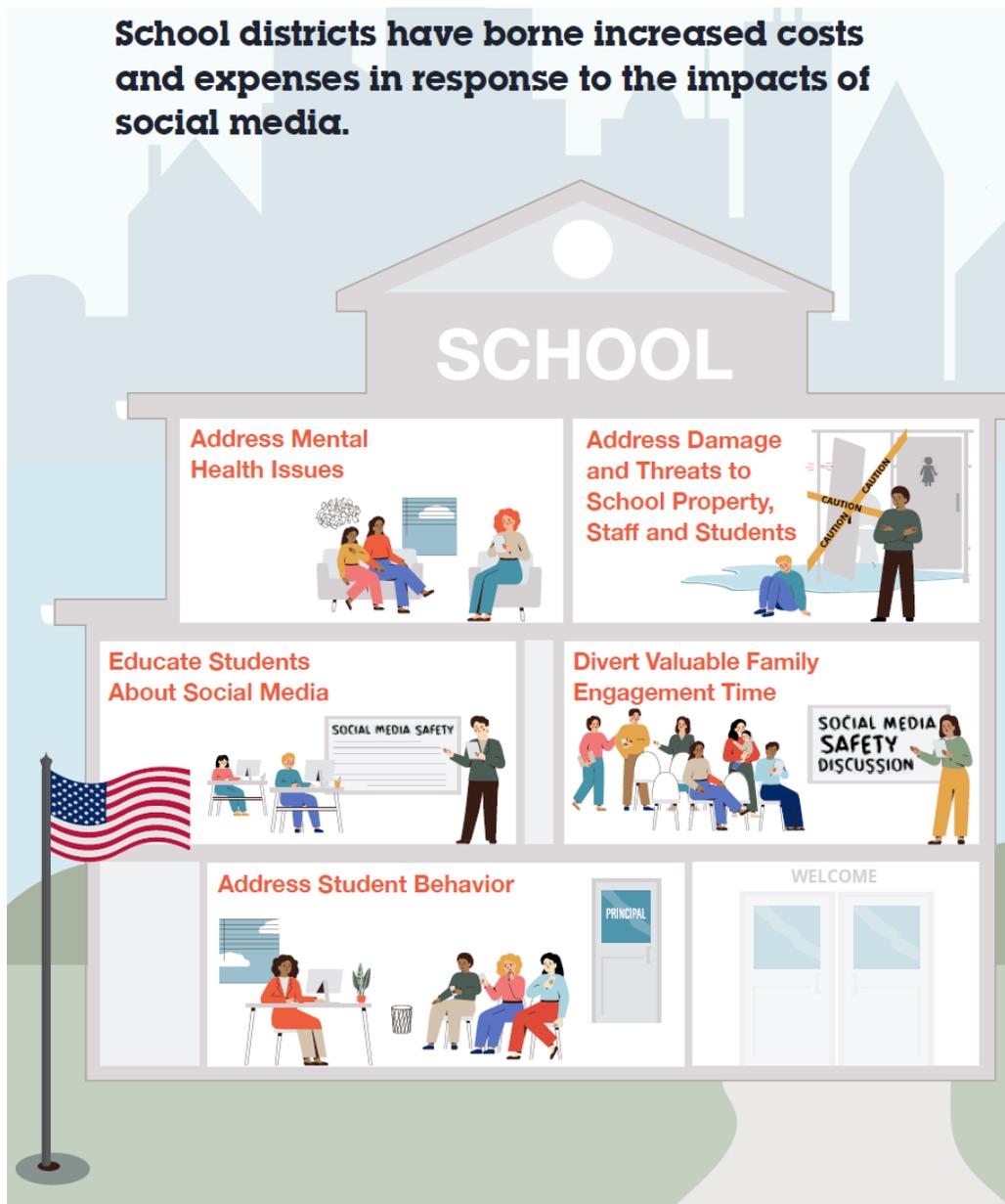
18 School districts have mustered significant resources to mitigate in-classroom
19 disruptions and grapple with an increase in depression and suicidal ideation among
20 students, dangerous and disruptive behavior, and bullying and harassment by and
21 directed at students, as well as the popularity of dangerous viral challenges that
22 originate from social media. Notably, the increased attention to tackling tech
23 companies’ omnipresent role in children’s lives has pulled resources away from the
24 core mission of education.⁹⁵⁴

23 803. The report highlights the impact of students’ social media use on the educational
24 environment, noting the “dramatic disruption in the teaching and learning ecosystems of all our

25 ⁹⁵³ Press Release, Am. Fed’n of Tchrs, *New Report Calls Out Social Media Platforms for*
26 *Undermining Schools, Increasing Costs, Driving Youth Mental Health Crisis* (July 20, 2023),
27 [https://www.aft.org/press-release/new-report-calls-out-social-media-platforms-undermining-schools-](https://www.aft.org/press-release/new-report-calls-out-social-media-platforms-undermining-schools-increasing-costs)
28 [increasing-costs](https://www.aft.org/press-release/new-report-calls-out-social-media-platforms-undermining-schools-increasing-costs).

⁹⁵⁴ *Id.*

1 nation’s schools[.]”⁹⁵⁵ The report confirms that “[d]ealing with social media-related issues detracts
2 from the primary mission of our schools, which is to educate our children,” and details the myriad
3 ways in which “[s]chool districts have borne increased costs and expenses in response to the
4 impacts of social media.”⁹⁵⁶



⁹⁵⁵ *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed’n Tchrs. (July 2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf.

⁹⁵⁶ *Id.* at 3–4.

1 804. Schools are one of the main providers for mental health services for school-aged
2 children.⁹⁵⁷ Indeed, over 3.7 million children ages 12–17 received mental health services through
3 an education setting in 2019, more than any other non-specialty mental health service setting.⁹⁵⁸

4 805. Most schools offer mental health services to students. In the 2021–22 school year,
5 96% of public schools reported offering at least one type of mental health service to their
6 students.⁹⁵⁹ But 88% “of public schools did not strongly agree that they could effectively provide
7 mental health services to all students in need.”⁹⁶⁰ The most common barriers to providing effective
8 mental health services in public schools are: (1) insufficient number of mental health
9 professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate
10 funding.⁹⁶¹ Student opinions also reflect that schools are unable to provide adequate mental health
11 services. Less than a quarter of students in grades 6–12 report accessing counseling or
12 psychological services when they are upset, stressed, or having a problem.⁹⁶² And of the students
13 who access mental health services, only 41% of middle schoolers and 36% of high schoolers are
14 satisfied with the services they receive.⁹⁶³

15 806. In part, schools are struggling to provide adequate mental health services because of
16 the increase in students seeking these services. More than two-thirds of public schools reported an
17 increase in the percent of students seeking mental health services from school since the start of the
18

19 ⁹⁵⁷ Substance Abuse & Mental Health Servs. Admin., U.S. Dep’t of Health & Hum. Servs., *National*
20 *Survey on Drug Use and Health*, (2019 & 1st & 4th Qs. 2020),
<https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables> [<https://perma.cc/NA32-JYQX>].

21 ⁹⁵⁸ *Id.*

22 ⁹⁵⁹ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health*
23 *Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022),
https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [<https://perma.cc/P4K9-4HF7>].

24 ⁹⁶⁰ *Id.*

25 ⁹⁶¹ *Id.*

26 ⁹⁶² *Insights From the Student Experience, Part I: Emotional and Mental Health* at 8, YouthTruth
27 (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf
[<https://perma.cc/UHV7-RNQ6>].

28 ⁹⁶³ *Id.* at 10.

1 pandemic.⁹⁶⁴

2 807. During this same period, adolescents increased their social media use, also raising
3 levels of excessive and problematic use of digital media.⁹⁶⁵ And these higher rates of social media
4 use are related to higher “ill-being.”⁹⁶⁶ Thus, the increase in adolescent social media use during
5 the pandemic has caused an increase in adolescents experiencing mental health problems.

6 808. That relationship is reflected in reports from public schools. Over 75% of public
7 schools reported an increase in staff expressing concerns about student depression, anxiety, and
8 other disturbances since the start of the pandemic.⁹⁶⁷ Students receiving mental health services in
9 educational settings predominately do so because they “[f]elt depressed[,]” were “thinking about
10 or attempt[ed] suicide” or “[f]elt very afraid and tense.”⁹⁶⁸

11 809. Anxiety disorders are also up, affecting 31.9% of adolescents between 13 and 18
12 years old.⁹⁶⁹ “Research shows that untreated teenagers with anxiety disorders are at higher risk to
13 perform poorly in school, miss out on important social experiences, and engage in substance
14 abuse.”⁹⁷⁰

15 810. According to the National Alliance on Mental Illness, “[s]tudents aged 6–17 with
16 mental, emotional or behavioral concerns are **3x times more likely** to repeat a grade[,]” and

17 ⁹⁶⁴ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health*
18 *Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022),
19 https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [<https://perma.cc/P4K9-4HF7>].

20 ⁹⁶⁵ Laura Marciano *et al.*, *Digital Media Use and Adolescents’ Mental Health During the Covid-19*
Pandemic: A Systematic Review and Meta-Analysis, 9 *Frontiers Pub. Health*, Feb. 1, 2022, at 6–8,
21 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/pdf/fpubh-09-793868.pdf>.

22 ⁹⁶⁶ *Id.*

23 ⁹⁶⁷ Press Release, Nat’l Ctr for Educ. Stat., *Roughly Half of Public Schools Report That They Can*
Effectively Provide Mental Health Services to All Students In Need (May 31, 2022),
https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [<https://perma.cc/P4K9-4HF7>].

24 ⁹⁶⁸ Rachel N. Lipari *et al.*, *Adolescent Mental Health Service Use and Reasons for Using Services in*
Specialty, Educational, and General Medical Settings at 6, *The CBHSQ Report* (May 5, 2016),
25 https://www.ncbi.nlm.nih.gov/books/NBK362074/pdf/Bookshelf_NBK362074.pdf.

26 ⁹⁶⁹ Anxiety & Depression Ass’n Am., *Anxiety Disorders: Facts & Statistics*,
27 <https://adaa.org/understanding-anxiety/facts-statistics>.

28 ⁹⁷⁰ *Id.*

1 “[h]igh school students with significant symptoms of depression are more than **twice as likely** to
2 drop out compared to their peers[.]”⁹⁷¹

3 811. Schools now are not only providing students with mental health services but also are
4 providing more academic supports because of the effects of increased mental health issues among
5 students. Students in grades 6–12 identify depression, stress, and anxiety as the most prevalent
6 obstacles to learning.⁹⁷² These negative mental health outcomes are also the most common
7 symptoms of excessive social media use. Most middle school and high school students also fail to
8 get enough sleep on school nights, which contributes to poor academic performance.⁹⁷³
9 Compulsive social media use is linked to reduced sleep time and quality.⁹⁷⁴ Social media use also
10 contributes to poor academic performance by distracting students during class or study time, and it
11 causes procrastination on school assignments. Defendants’ conduct has interfered with students’
12

13 ⁹⁷¹ Nat’l All. on Mental Illness, *Mental Health By the Numbers* (last updated Apr. 2023),
14 <https://www.nami.org/mhstats> (citing *2020–2021 National Survey of Children’s Health*, Data Res.
15 Ctr. for Child & Adolescent Health, [https://www.childhealthdata.org/browse/survey/
16 results?q=9463&r=1&g=1023](https://www.childhealthdata.org/browse/survey/results?q=9463&r=1&g=1023); Véronique Dupère *et al.*, *Revisiting the Link Between Depression
17 Symptoms and High School Dropout: Timing of Exposure Matters*, *J. Adolescent Health* 62 (2018)
18 205–211 (2017), [https://www.jahonline.org/article/S1054-139X\(17\)30491-3/fulltext](https://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext)
19 [<https://perma.cc/48WF-NRX4>]).

20 ⁹⁷² *Insights From the Student Experience, Part I: Emotional and Mental Health at 2*, YouthTruth
21 (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf
22 [<https://perma.cc/UHV7-RNQ6>].

23 ⁹⁷³ Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-*
24 *United States, 2015*, 67(3) *Morbidity & Mortality Wkly. Rep.* 85–90 (2018),
25 <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6703a1-H.pdf>.

26 ⁹⁷⁴ Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of*
27 *undergraduate medical students*, 77 *Med. J. Armed Forces India* 37–41 (2021),
28 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf> (citing Aryn C. Karpinski *et al.*,
29 *An exploration of social networking site use, multitasking, and academic performance among*
30 *United States and European university students*, 29(3) *Computs. Hum. Behav.* 1182–1192 (2013),
31 <https://www.sciencedirect.com/science/article/abs/pii/S0747563212002798> [[https://perma.cc/C43P-
32 J8V9](https://perma.cc/C43P-J8V9)]; Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and*
33 *academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) *BMC*
34 *Psychiatry* 28 (2019),
35 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf); *see*
36 *also* Yubo Hou *et al.*, *Social media addiction: Its impact, mediation, and intervention*, 13(1) *J.*
37 *Psychosocial Rsch. On Cyberspace* 4 (2019), <https://cyberpsychology.eu/article/view/11562/10369>.

1 educational opportunities and outcomes, and school districts’ efforts to provide students with a
2 safe and high-quality public education.

3 812. The youth mental health crisis has also caused a wide range of other behavioral
4 issues among students that interfere with schools’ ability to teach. In 2022, 60% of public schools
5 saw an increase in classroom disruptions from student misconduct compared to school years
6 before the pandemic.⁹⁷⁵ In that same year, 57% of public schools also saw an increase in
7 rowdiness outside of the classroom, 67% saw increases in tardiness, 28% saw increases in
8 students skipping classes, 54% saw increases in the use of electronic devices when not permitted,
9 38% saw an increase in physical fights between students, and 45% saw an increase in threats of
10 fights between students.⁹⁷⁶

11 813. Vandalism also increased in 2022, with 35% of public schools reporting increased
12 acts of student vandalism on school property.⁹⁷⁷ Schools have seen a rise in vandalism of school
13 property coinciding with the youth mental health crisis that Defendants’ platforms have been a
14 substantial factor in bringing about, and at the same time specific aspects of the platforms
15 encourage users to participate in escalating, attention-seeking behaviors that have led to damage of
16 school property.

17 814. Further, social media distraction “moderates the relationship between students’
18 cognitive engagement and their evaluation of teaching faculty.”⁹⁷⁸ Social media distractions
19 “disrupt student engagement inside the classroom,” leading to wrong or biased assessments of a
20 teacher’s performance while also exacerbating struggles with academic achievement.⁹⁷⁹ Declines

21 ⁹⁷⁵ Inst. Educ. Scis., *School Pulse Panel: Student Behavior*, <https://ies.ed.gov/schoolsurvey/spp/>.

22 ⁹⁷⁶ *Id.*

23 ⁹⁷⁷ *Id.*

24 ⁹⁷⁸ Priyanka Nema, *Impact of social media distraction on student evaluation of teacher effectiveness*,
25 37 Int’l J. Educ. Mgmt. 300–313, 308 (2023), <https://www.emerald.com/insight/content/doi/10.1108/IJEM-10-2022-0389/full/html> [<https://perma.cc/2FK2-ZP6P>].

26 ⁹⁷⁹ *Id.* at 300; Teun Sivers, *Social Media and Distraction: An Experience Sampling Study among*
27 *Adolescents*, 25(3) Med. Psych. 343–366 (2021), <https://www.tandfonline.com/doi/epdf/10.1080/15213269.2021.1959350?needAccess=true>; Jia-Qiong Xie *et al.*, *The association between*
28 *excessive social media use and distraction: An eye movement tracking study*, 58 Info. & Mgmt.,
(footnote continued)

1 in academic performance can affect school district funding, governmental review metrics, and
2 teacher reviews, in addition to taxing students’ mental health. These issues and others stemming
3 from students’ social media use, discussed above, also drive declining teacher and staff morale,
4 making retaining and hiring qualified staff more difficult for school districts.⁹⁸⁰

5 815. School districts have been, and continue to be, uniquely harmed by students’
6 compulsive use of, and addiction to, social media. Students’ compulsive, problematic use of
7 Defendants’ platforms results in significant disruption to schools’ operations, greatly frustrates
8 their ability to achieve their mandate of educating students in a safe and healthy environment, and
9 forces school districts to expend or divert significant resources in response.

10 816. Because of the way social media platforms are designed, any interaction between
11 students or events (on school grounds or outside of school) can be amplified, shared widely and
12 immediately, reposted, rehashed, and blown out of proportion. Whether or not this online
13 amplification happens during school hours, if it involves students, it will fall to school
14 administrators and staff to respond.

15 817. The nature of Defendants’ platforms means that information moves through a school
16 community rapidly, and spreads farther than it otherwise could. It is extremely challenging, if not
17 impossible, for teachers and administrators to get ahead of it. Teachers and administrators start
18 each school day with the possibility that something involving their students might have spiraled
19 out of control on social media overnight. Or, something might transpire during class time,

21 Mar. 2021, <https://www.sciencedirect.com/science/article/abs/pii/S0378720620303530>
22 [<https://perma.cc/3E76-5UUT>]; META3047MDL-003-00096266 at META3047MDL-003-
23 00096266 (Facebook employee recognized, “lots of cross-sectional studies that can’t tell whether
24 teens feel like their time on their phones causes worse mental health / problems in school or whether
their mental health and feelings about school drive them to spend more time on their phones. It’s
probably both.”).

25 ⁹⁸⁰ See Rebecca Ruiz, *How social media in the classroom is burning teachers out*, Mashable (Sept.
26 16, 2023), <https://mashable.com/article/teacher-burnout-social-media-in-the-classroom> (teacher
27 noting feeling “burnt out and demoralized” trying to deal with “tectonic shifts in classroom
behavior” from students’ social media use—“rank[ing] the issue among the top factors contributing
28 to teacher burnout in her educator community”—and that due to “the emotional and mental strain on
teachers managing this problem won’t lessen until the technology driving it changes”).

1 affecting multiple students within the classroom but with no way for the teacher to see what is
2 coming. Moreover, the instantaneous dissemination of social media posts across a broad
3 network—part of the design of Defendants’ platforms—can result in the formation of a “pack” or
4 herd mentality. Rather than needing to address an issue with a single student or a small group of
5 students, teachers, administrators, and counselors must address issues affecting large groups of
6 students at the same time. Often, to do so effectively requires meeting with students one on one,
7 which takes a significant amount of time for counseling staff.

8 818. Even if teachers or administrators implement a policy that requires students to put
9 devices away or physically out of reach during class time, the addictive nature of Defendants’
10 platforms continues to disrupt learning. Students struggle with being separated from Defendants’
11 platforms and experience anxiety over missing even a single notification, and this anxiety
12 interferes with students’ ability to focus and learn.

13 819. Addressing the wide range of impacts from students’ social media addiction requires
14 a multi-faceted approach requiring school districts to divert human and financial resources to
15 address social media-related student behavior or mental health issues.

16 820. Staff and teachers cannot ignore students who are in crisis and need to support those
17 students. School campuses are public spaces, and classes and activities are communal experiences.
18 Increases in anxiety, depression, suicidal ideation, and other mental health crises impact both the
19 students suffering from these problems and the other students, teachers, and staff who need to
20 interact with these students.

21 821. To address this complex issue, school districts must both provide significant support
22 for students in crisis, and also educate staff, parents, and the community about the dangers
23 presented by Defendants’ platforms. Such education includes how to safeguard children from
24 those dangers, and how to support students and families impacted by social media addition and
25 problematic use. School districts are one of the primary providers of mental health services to
26 youth. Youth addiction to social media platforms diverts time away from the educational mission
27 of schools districts and from other valuable engagement time.

28 822. School districts have contacted one or more of Defendants and asked for assistance

1 relating to problems caused by Defendants’ platforms and often received inadequate responses or
2 no response at all.⁹⁸¹ For example, Meta reported internally that a middle school in Oakland asked
3 Facebook to implement a “hotline in which real people could help school officials (deans of
4 discipline, administrators, [and/or] teacher leaders)” solve problems being caused by social media,
5 but that it would “[p]robably not [be] cheap[.]”⁹⁸² Another Meta employee noted they had been
6 “having a lot of conversations lately with Principals at schools and school districts.”⁹⁸³

7 823. Examples of expenditures school districts have been forced to make to address
8 students’ problematic social media use include, but are not limited to:

- 9 a. Diverting time and resources from instruction activities to address unauthorized in-
10 classroom use of social media by students;
- 11 b. Increasing disciplinary services and hiring additional personnel in response to
12 increased behavior issues caused by students’ social media use;
- 13 c. Addressing property damaged as a result of students’ addiction to social media and
14 compulsive participation in social media challenges that direct destruction or theft of
15 property;
- 16 d. Addressing property damaged as a result of students acting out because of mental,
17 social, and emotional problems Defendants’ conduct caused;
- 18 e. Diverting time and resources from instruction activities to notify parents and
19 guardians of students’ behavioral issues and attendance problems;
- 20 f. Investigating and responding to threats made against schools and students over social
21 media that are pushed by Defendants’ platforms to drive user engagement;
- 22 g. Adding additional information technology resources in an attempt to limit students’
23 access to social media platforms and mitigate risks posed by students’ social media

24 ⁹⁸¹ See *Likes vs. Learning: The Real Cost of Social Media for Schools* at 12, Am. Fed’n Tchrs.
25 (2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf
26 (“Currently, it is nearly impossible to get a timely response from a platform when there is a social
media-enabled crisis.”).

27 ⁹⁸² META3047MDL-003-00047518 at META3047MDL-003-00047518.

28 ⁹⁸³ META3047MDL-003-00021695.

- 1 use;
- 2 h. Investing in physical barriers (such as magnetic pouches) to keep students from
- 3 accessing social media platforms on school property;
- 4 i. Developing new and revised teaching plans to address students’ altered learning
- 5 habits, e.g., reduced attention span, inability to communicate effectively;
- 6 j. Providing additional learning support to address students’ declining achievement,
- 7 e.g., after school support, as a result of the negative impact of problematic social
- 8 media use on students’ ability and capacity to learn;
- 9 k. Hiring additional mental health personnel (41% of public schools added staff to focus
- 10 on student mental health);⁹⁸⁴
- 11 l. Developing additional mental health resources (46% of public schools created or
- 12 expanded mental health programs for students, 27% added student classes on social,
- 13 emotional, and mental health and 25% offered guest speakers for students on mental
- 14 health);⁹⁸⁵
- 15 m. Training teachers to help students with their mental health needs, and training staff to
- 16 identify students and youth exhibiting symptoms of mental health issues (56% of
- 17 public schools offered professional development to teachers on helping students with
- 18 mental health);⁹⁸⁶
- 19 n. Updating student handbooks, student and parental guidelines, and similar materials to
- 20 address use of Defendants’ platforms; and
- 21 o. Updating school policies and guidelines to address use of Defendants’ platforms.
- 22 824. Defendants knew their actions were having a serious impact on school districts and
- 23 have nonetheless refused to change their conduct.⁹⁸⁷

24 ⁹⁸⁴ *Id.*

25 ⁹⁸⁵ *Id.*

26 ⁹⁸⁶ *Id.*

27 ⁹⁸⁷ *See, e.g.*, META3047MDL-003-00084526 at META3047MDL-003-00084528 (“More than half

28 of U.S. school principals say they’re extremely concerned about children’s use of social media
(footnote continued)

1 825. This impact on schools is no surprise. Defendants have deliberately targeted school-
2 aged children, while knowing the impact this could have on schools. In fact, Defendants counted
3 on use of their addictive platforms spreading through entire school communities. For example,
4 Meta set out to infiltrate schools specifically, noting in a presentation reviewed by Mark
5 Zuckerberg himself that “[h]igh school is the key driver of U.S. teen social activity and occupies
6 6+ hours per day[.]”⁹⁸⁸ Meta knew that getting into high schools was key, reporting that that
7 “[r]esearch indicates that we have ‘FB’ and ‘non-FB’ high schools; tipping schools may be high
8 impact” and “[i]n the United States, per-high school adoption is a crucial driver of teen Facebook
9 engagement[.]”⁹⁸⁹ For example, Meta conducted a school analysis and concluded that “‘FB High
10 Schools’ (>75% adoption) have ... 22% more [Time Spent] per [Monthly Active Person] . . .
11 compared to high schools with 5-30% FB adoption[.]”⁹⁹⁰ As a result of this research, Meta set out
12 to make “big 2017 bets” on “High School Communities” to attract “teens.”⁹⁹¹ The goal of this
13 work was to “[g]row [Monthly Active Person], [Daily Active Person], and time spent among U.S.
14 teens.”⁹⁹² The same presentation stated that Meta planned to “emphasize ‘social entertainment’
15 market opportunities to win back teen interaction.”⁹⁹³ Meta noted, “we should bet big on
16 Instagram Direct + stories to beat Snapchat” and that the goal was to “increase U.S. teen time
17 spent.”⁹⁹⁴

18 826. Meta adopted similar policies for Instagram, noting that “[n]early everyone attends
19 high school” and “[t]he school someone attends is a big part of their life[.]”⁹⁹⁵ In their own words
20

21 outside of school[.]”).

22 ⁹⁸⁸ META3047MDL-003-00134688 at META3047MDL-003-00134706.

23 ⁹⁸⁹ *Id.*; *id.* at META3047MDL-003-00134714-715.

24 ⁹⁹⁰ *Id.* at META3047MDL-003-00134715.

25 ⁹⁹¹ *Id.* at META3047MDL-003-00134708.

26 ⁹⁹² *Id.* at META3047MDL-003-00134706.

27 ⁹⁹³ MDL AG Compl. at 27, ¶ 147.

28 ⁹⁹⁴ *Id.*

⁹⁹⁵ META3047MDL-003-00023595.

1 “[w]inning schools is the way to win with teens because an individual teen’s engagement is highly
2 correlated with school [Monthly Active Person] penetration.”⁹⁹⁶ The Instagram “teen’s team” also
3 discussed how to study “teen penetration and engagement on [a] school level in [the] US” and
4 noted their capability to tell when teens “open the app AT school” and geolocate “which high
5 school they go to.”⁹⁹⁷ Similarly, a 2017 presentation detailed how Meta planned to increase time
6 spent by teens while teens are in school, including live broadcasts of high school sports.⁹⁹⁸

7 827. Instagram also intentionally reached into schools by partnering with the National
8 PTA and Scholastic to get materials into the hands of “parents, grandparents, and educators at
9 scale” and to “integrate [their] parent’s guide and [Instagram] programming into the 500 back to
10 school nights” across the country.⁹⁹⁹ Instagram reported that partnering with “Scholastic gives us
11 the ability to win educators and the school community, creating a ripple effect to allow us to win
12 parents and families” and let them reach out to “20,000 classrooms across the U.S.” and to
13 “250K+” teachers.¹⁰⁰⁰ While Instagram may try to characterize this work as helpful to addressing
14 youth mental health problems, they were more candid in other documents about using this as a
15 strategy to get more teen users, explaining that the goal of the parents plan was to get “parents to
16 think, [‘]my kids are on social media, and my FAVORITE app for them to be on is Instagram, bar
17 none.” Thus, “[w]hat winning looks like” for Instagram is to have “[p]arents believe Instagram is
18 the social media platform of choice for their kids.”¹⁰⁰¹ Instagram also tested new features by high
19 school, noting that “getting critical mass in a high school very quickly (e.g., in the same
20 afternoon) is extremely important” and one way to do this was “a (hacky) way to use push
21 notifications from their [Instagram] account to tell students ‘we just shipped this for your

22 ⁹⁹⁶ *Id.*

23 ⁹⁹⁷ META3047MDL-003-00022355 at META3047MDL-003-00022355, META3047MDL-003-
24 00022356.

25 ⁹⁹⁸ MDL AG Compl. at 27, ¶ 147.

26 ⁹⁹⁹ META3047MDL-003-00084526 at META3047MDL-003-00084527–META3047MDL-003-
27 00084527.

28 ¹⁰⁰⁰ *Id.* at META3047MDL-003-00084528.

¹⁰⁰¹ META3047MDL-003-00082536 at META3047MDL-003-00082538.

1 school[.]”¹⁰⁰² They explained “[w]e want to learn as much as we can from these High School
2 tests about what levers we have for driving teen engagement[.]”¹⁰⁰³ Schools are so important to
3 Meta because “[e]ngaging the vast majority of teens in an area / school with our products is
4 crucial to driving overall time spent in the same area[.]”¹⁰⁰⁴ Meta boiled it down to a simple
5 message: “Winning Teens = Winning High Schools[.]”¹⁰⁰⁵

6 828. TikTok is likewise well aware of school-age children using its platform. When
7 TikTok decides to age verify youth users, one of the tools it uses is “school ID.”¹⁰⁰⁶ TikTok
8 created and shared a chart with its staff showing how age correlated to grade in school and birth
9 year:¹⁰⁰⁷

AGE	GRADE	Birth Year
8 yrs	3rd	2012-2013
9 yrs	4th	2011-2012
10 yrs	5th	2010-2011
11 yrs	6th	2009-2010
12 yrs	7th	2008-2009
13 yrs	8th	2007-2008
14 yrs	9th	2006-2007
15 yrs	10th	2005-2006
16 yrs	11th	2004-2005
17 yrs	12th	2003-2004

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23 ¹⁰⁰² META3047MDL-003-00138616 at META3047MDL-003-00138617.

24 ¹⁰⁰³ *Id.*

25 ¹⁰⁰⁴ META3047MDL-003-00021467.

26 ¹⁰⁰⁵ META3047MDL-003-00023583.

27 ¹⁰⁰⁶ TIKTOK3047MDL-001-00060190.

28 ¹⁰⁰⁷ *Id.*

1 829. The company also admits that “TikTok is particularly popular with younger users,
2 who are seen as more vulnerable to online harms and the negative impacts of compulsive use.”¹⁰⁰⁸
3 Internal research confirmed that users try to “mitigate TikTok’s interference with their obligations
4 and productivity” including “school.”¹⁰⁰⁹ However, the same research noted that the “aspects of
5 TikTok that contributed to participants’ challenges with managing their time including the
6 continuous scroll, few or no breaks between content, short videos, and not knowing what the next
7 video will be[,]” the same types of features at issue in this complaint.¹⁰¹⁰

8 830. TikTok acknowledged that users believe its “platform is addictive,” and that
9 “compulsive usage interferes with essential personal responsibilities” such as “sufficient sleep,”
10 “school responsibilities,” and “connecting with loved ones.”¹⁰¹¹ TikTok admitted that it is
11 interfering with the school day and student sleep, stating, “we send notifications to users during
12 the school day and in some cases, up until midnight which could interfere with sleep.”¹⁰¹²
13 Therefore, it stated, “[w]e should therefore be prepared to implement product changes to address
14 concerns in [the wellbeing] area if needed, including . . . [a]voiding sending users push
15 notifications around bedtime and (for younger users) during the school day[.]”¹⁰¹³

16 831. TikTok also sought to directly enter schools, noting that “we have about 80 high
17 schools across the country” that it would be sending its TikTok toolkit to for “back to school
18 nights” and that it was “coordinating with the Department of Education and they plan to send a
19 PDF of the toolkit in their August newsletter, which is going out on Friday to nearly 30K
20 subscribers.”¹⁰¹⁴ As with Meta, TikTok recognized the importance of controlling the narrative,
21 noting in a different document that recent years had been “fraught with PR and GR [Government

22 ¹⁰⁰⁸ TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-0006161327.

23 ¹⁰⁰⁹ *Id.* at TIKTOK3047MDL-001-00061324.

24 ¹⁰¹⁰ *Id.*

25 ¹⁰¹¹ TIKTOK3047MDL-001-00060485.

26 ¹⁰¹² TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-00061327.

27 ¹⁰¹³ *Id.* at TIKTOK3047MDL-001-00061333.

28 ¹⁰¹⁴ TIKTOK3047MDL-001-00005239.

1 Relations] issues for ByteDance and TikTok” which “reduced advertiser trust, user loyalty,
2 investor confidence, and [TikTok’s] ability to consistently hire top talent.” Combating these issues
3 would “ensure the long term success of the ByteDance ecosystem and help further [the TikTok]
4 brand.”¹⁰¹⁵

5 832. Similarly, a large part of Snapchat’s success has been its virality on school
6 campuses.¹⁰¹⁶ According to an interview regarding Snapchats’ early adoption, “the app started
7 catching on with high schoolers in LA as they could send digital notes back and forth during
8 classes.”¹⁰¹⁷ Snapchat “grew very quickly in tight-knit communities at high schools and colleges,
9 where students interact at a very high frequency and can (and did) tell each other to download
10 Snapchat in between classes.”¹⁰¹⁸ Once Snapchat knew it had appeal among school-aged children,
11 Snapchat “ran with it and never looked back.”¹⁰¹⁹



23 ¹⁰¹⁵ TIKTOK3047MDL-001-00060485.

24 ¹⁰¹⁶ *How Snapchat Gained Success By Going Viral At High Schools Across Los Angeles*, Forbes
25 (Feb. 16, 2018), <https://www.forbes.com/sites/quora/2018/02/16/how-snapchat-gained-success-by-going-viral-at-high-schools-across-los-angeles/?sh=6f1676083b36> [<https://perma.cc/M7LP-ZUAT>].

26 ¹⁰¹⁷ *Id.*

27 ¹⁰¹⁸ *Id.*

28 ¹⁰¹⁹ *Id.*

1 833. Snapchat has long been aware of its connection to schools and the large impact it has
2 had on classrooms. After Snapchat added new features to the app, news organizations noted the
3 havoc it was wrecking on classrooms: “No one was more excited about the update than Snapchat’s
4 target demographic: teens. And no one could have used a warning about the huge in-app changes
5 more than high-school teachers,” one of whom noted that “[i]n 16 years of teaching I can’t think
6 of anything that has ever disrupted my classroom more than today’s Snapchat update.”¹⁰²⁰ The
7 teacher explained that during class kids were so focused on updating their Snapchat, “you would
8 have thought it was crack. They seriously could not keep away from it. I even had one girl crawl
9 under the table with her phone.”¹⁰²¹

10 834. Snapchat also highlights its connection to schools when communicating with
11 advertisers, promoting “Back to School on Snapchat”¹⁰²² and “Snap to School.”¹⁰²³ The company
12 explained that it had an “unparalleled student and parent audience”¹⁰²⁴ and noted that 90% of
13 students (ages 13-24) in the U.S. and UK are on Snapchat.¹⁰²⁵ Last year, Snapchat promoted new
14 features and the ability to access Snapchat from a desktop computer, not just a phone, “just in time
15 for back to school” to let students “keep conversations with friends going from any device[,]”
16 underscoring the importance of student users and further emphasizing Snapchat’s desire to
17 maximize user engagement, i.e., continuous interaction with the platform, by this key group.¹⁰²⁶

18 835. Similarly, YouTube is well aware of both its high levels of use by school age

19 ¹⁰²⁰ Caroline Moss, *HIGH-SCHOOL TEACHER: In 16 Years Of Teaching, Nothing Has Disrupted*
20 *My Classroom More Than Snapchat’s New Update*, Bus. Insider (May 2, 2014),
<https://www.businessinsider.com/high-school-teacher-on-snapchat-update-2014-5>.

21 ¹⁰²¹ *Id.*

22 ¹⁰²² See, e.g., *Back to School on Snapchat*, Snap Inc., <https://forbusiness.snapchat.com/back-to-school-2021> (last visited Feb. 12, 2024).

23 ¹⁰²³ *Snap to School is in Session*, Snap Inc., <https://forbusiness.snapchat.com/back-school> (last
24 visited Feb. 12, 2024).

25 ¹⁰²⁴ *Id.*

26 ¹⁰²⁵ See, e.g., *Back to School on Snapchat*, Snap Inc., <https://forbusiness.snapchat.com/back-to-school-2021> (last visited Feb. 12, 2024).

27 ¹⁰²⁶ *Fresh Features for Fall!*, Snap Inc. (Sept. 15, 2022), <https://newsroom.snap.com/fresh-fall-features>.

1 children and the impact on schools. YouTube is the most popular social media platform with
2 students. Ninety-five percent of children ages 13–17 have used YouTube.¹⁰²⁷ Seventy-seven
3 percent of teens report using YouTube every day and nearly 20 percent of teens report using
4 YouTube almost constantly, the most of any of Defendants platforms.¹⁰²⁸

5 836. YouTube has leveraged its popularity among school children to increase its revenue
6 from advertisements by marketing its platform to popular brands of children’s products. For
7 example, Google pitched Mattel, the maker of Barbie and other popular kids’ toys, by telling its
8 executives that “YouTube is today’s leader in reaching children age 6–11 against top TV
9 channels.”¹⁰²⁹ When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other kids’
10 toys, Google touted that “YouTube [was] unanimously voted as the favorite website for kids 2-
11 12,” and that “93% of tweens visit YouTube to watch videos.”¹⁰³⁰ In a different presentation to
12 Hasbro, YouTube was referred to as “the “#1 website regularly visited by kids.”¹⁰³¹

13 837. Compulsive use of YouTube by school children is causing serious problems for
14 students and school districts, as students struggle with their mental health, become sleep deprived,
15 and act out. Public reporting has confirmed that students are “glued to the[ir] devices during class
16 — posting on social media [and] searching YouTube.”¹⁰³² As a result, school districts across the
17 country have been imposing bans on the cellphones used to access Defendants’ platforms to
18 attempt to “to curb student obsession, learning disruption, disciplinary incidents and mental health
19

20 ¹⁰²⁷ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
21 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

22 ¹⁰²⁸ *Id.*

23 ¹⁰²⁹ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit A, *FTC*
24 *v. Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3-1,
https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_exhibits_a-c.pdf.

25 ¹⁰³⁰ *Id.* at Exhibit B.

26 ¹⁰³¹ *Id.* at Exhibit C.

27 ¹⁰³² Donna St. George, *Students can’t get off their phones. Schools have had enough*, Wash. Post
28 (May 9, 2023), <https://www.washingtonpost.com/education/2023/05/09/school-cellphone-ban-yondr/> [<https://perma.cc/8LV6-6WQ2>].

1 worries.”¹⁰³³

2 **2. New York City is experiencing a youth mental health crisis.**

3 **a. Adolescents’ incessant use of and addiction to Defendants’ social media**
4 **platforms is disruptive and harmful to the environment in NYC Public**
5 **Schools and to New York City youth.**

6 838. Social media use among young people across the United States has increased over
7 time and become ubiquitous. A 2023 *Pew Research Center* poll reported that 93 percent of
8 adolescents aged 13 to 17 admit to being online at least several times a day, and 46 percent say
9 they are online on a near constant basis. For Black and Hispanic teens, the numbers are even
10 higher: 54 percent of Black teens and 55 percent of Hispanic teens report being online almost
11 constantly, compared to 38 percent of white teens. Much of that time online is spent on social
12 media platforms. For example, a third of teens use at least one of YouTube, TikTok, Snapchat,
13 Instagram or Facebook almost constantly.¹⁰³⁴

14 839. A recent report by the American Federation of Teachers described the many ways in
15 which social media is a “dramatic disruption” to schools:

16 Schools are ... grappling with an increase in dangerous and disruptive behavior. Districts
17 report having to develop new policies and resources to address the increase in bullying and
18 harassment by students, and directed at students, that is taking place on social media. Viral
19 challenges are also having a traumatic impact. The “devious licks” (destroying school
20 property) and “slap a teacher” TikTok challenges were certainly concerns for schools. The
21 “swatting” challenge encourages students to make hoax calls to law enforcement to falsely
22 report school shootings, creating fear and confusion among students, staff and families.
23 These challenges are unfolding on playgrounds, school buses, in school hallways and during
24 the extracurricular activities at school. Some challenges can even be deadly, such as the
25 “choking game.”¹⁰³⁵

26 840. Social media use by New York City youth is similarly pervasive—and disruptive. In
27 2021, 77.3 percent of New York City high school students—and 82.1 percent of girls—admitted
28 to spending 3 or more hours a day on screen time (not counting time spent doing schoolwork) in

25 ¹⁰³³ *Id.*

26 ¹⁰³⁴ Monica Anderson et al., *Teens, Social Media and Technology 2023*, Pew Rsch. Ctr. (Dec. 11,
2023), <https://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/>.

27 ¹⁰³⁵ *Likes vs Learning: The Real Cost of Social Media For Schools*, Am. Fed’n Tchrs. (July 2023),
28 https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf.

1 front of a TV, computer, smart phone or other electronic device, watching shows or movies,
2 playing games, accessing the internet or using social media.¹⁰³⁶ And according to a 2022 report by
3 McKinsey, 56 percent of Gen Zers¹⁰³⁷ in New York City self-reported spending “too much time
4 on social media.”¹⁰³⁸

5 841. It is alarming, but perhaps not surprising, then, that in 2019, over 80 percent of New
6 York City high school students were getting less than 8 hours of sleep a night on school nights,
7 including 18.5 percent who reported getting 4 hours of sleep or less, 16.8 percent who reported
8 getting 5 hours of sleep, 22.6 percent who reported getting 6 hours of sleep, and 22.5 percent who
9 reported getting 7 hours of sleep.¹⁰³⁹

10 842. Social media use at school is also prevalent among students attending NYC Public
11 Schools. The ubiquity of use of Defendants’ platforms among NYC Public Schools students has
12 caused disruption to the learning environment within NYC Public Schools’ campuses. A majority
13 of NYC Public Schools’ middle school and high school students have cell phones and bring them
14 to school. Many students have used these phones to access Defendants’ social media platforms
15 during the school day, in classrooms, and during instructional periods, and as a result, struggled to
16 be physically present with their peers and teachers in the classroom setting because of the
17 distraction that social media posed.

18 843. As a result, teachers have been in a near constant battle with social media to hold
19 students’ attention. One NYC Public Schools teacher noticed that when teens began to bring their

20 ¹⁰³⁶ *Youth Risk Behavior Surveillance System (YRBSS)*, CDC (Apr. 27, 2023), www.cdc.gov/yrbs.

21 ¹⁰³⁷ According to the *Pew Research Center*, Generation Z consists of individuals born between
22 1997–2012. See Michael Dimock, *Defining Generations: Where Millennials end and Generation Z*
23 *Begins*, Pew Rsch. Ctr. (Jan. 17, 2019), <https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/>.

24 ¹⁰³⁸ *Addressing the state of behavioral health in New York City*, McKinsey & Co. (Feb. 16, 2022),
25 https://www.mckinsey.com/industries/public-sector/our-insights/addressing-the-state-of-behavioral-health-in-new-york-city#.

26 ¹⁰³⁹ See *2019 Youth Risk Behavior Survey Data*, www.cdc.gov/yrbs; see also *2019 Youth Risk*
27 *Behavior Survey Results: N.Y.C. High School Survey Codebook* at 16, N.Y.C.,
28 <https://www.nyc.gov/assets/doh/downloads/pdf/episrv/codebook-citywide-yrbs-2019.pdf> (last
visited Feb. 6, 2024).

1 internet-connected devices equipped with social media accounts to school, their “attention span[s]
2 seemed shorter, and [they] became more prone to distraction.”¹⁰⁴⁰

3 844. Like other schools around the country, NYC Public Schools teachers are forced to
4 interrupt or stop instruction frequently to direct students to put their cell phones away or to
5 confiscate cell phones, including because of students’ social media use on those phones. Indeed,
6 one teacher at a NYC Public Schools high school noted that students have become more
7 distracted, with cell phone use being disruptive in class. “There’s never been a period that goes by
8 that I don’t have to say, ‘Put away your phone,’ like 15 or 16 times,” the teacher said.¹⁰⁴¹ These
9 repetitive interruptions add up to a significant amount of lost instructional time, not only for the
10 student accessing social media, but for the entire class.¹⁰⁴²

11 845. NYC Public Schools has also dealt with an increased number of students who are
12 chronically absent. In the 2022–23 school year, 36.2% of NYC Public Schools students were
13 chronically absent, missing at least 10 percent of the school year. This is far higher than the 26.5%
14 who were chronically absent in 2018–19, or the 25.1% who were chronically absent in 2019–
15 20.¹⁰⁴³ As reported in the media, with student mental health concerns on the rise, some families
16 have struggled to coax their children to attend school. And in turn, chronic absenteeism is a key
17 metric of school performance, meaning absences can hurt student achievement in the long run.

18 846. NYC Public Schools Chancellor’s Regulation A-413 sets forth policies concerning
19 the use of cell phones, laptops, tablets and other devices on each school’s property.

20 847. In accordance with that regulation, schools across the city have established school-
21 specific policies, including, for example, (1) requiring cell phones to be turned off and stored at all

22 ¹⁰⁴⁰ Rebecca Ruiz, *How social media in the classroom is burning teachers out*, Mashable (Sept. 16,
23 2023), <https://mashable.com/article/teacher-burnout-social-media-in-the-classroom>.

24 ¹⁰⁴¹ Julian Shen-Berro, *Student behavior remains concerning amid COVID’s impact, educators say*,
25 Chalkbeat N.Y. (Mar. 7, 2023), <https://www.chalkbeat.org/2023/3/7/23628032/student-behavior-covid-school-classroom-survey/>.

26 ¹⁰⁴² *Id.*

27 ¹⁰⁴³ *End-of-Year Attendance and Chronic Absenteeism Data*, N.Y.C. Pub. Schs. InfoHub,
28 <https://infohub.nyced.org/reports/students-and-schools/school-quality/information-and-data-overview/end-of-year-attendance-and-chronic-absenteeism-data> (last visited Feb. 12, 2024).

1 times during the school day¹⁰⁴⁴; (2) requiring all students' cell phones to be turned off before
2 entering the building, and in addition requiring students in grades 6-8 to hand in their phones
3 during first period each school day, to be returned 5 minutes before the end of the day¹⁰⁴⁵; (3)
4 mandating the use of a Yondr case that makes cell phones inaccessible until unlocked at the end of
5 the school day¹⁰⁴⁶; (4) allowing use of cell phones only in the lobby and cafeteria¹⁰⁴⁷; (5) requiring
6 all students to turn off and hand in their cell phones to school staff to be held during the day¹⁰⁴⁸;
7 (6) banning any phone calls, texting, or use of any form of social media while at school¹⁰⁴⁹; and
8 (7) directing that violation of the rules would result in confiscation of the devices. Accordingly,
9 NYC Public Schools administrators, teachers, and staff are now required to divert time from
10 education and administrative activities toward monitoring use of devices, including social media.

11 848. Social media use among NYC Public Schools students has also led NYC Public
12 Schools to expend resources to develop and provide to teachers a curriculum on Digital
13 Citizenship for all grades, which includes instruction on internet safety practices, addictive
14 qualities of social media, and positive tech habits.¹⁰⁵⁰ School administrators have also expended
15 resources to develop Social Media Guidelines for Students 12 and Under, Social Media
16

17 _____
18 ¹⁰⁴⁴ See, e.g., *2023-2024 Cell Phone Policy*, P.S. 188Q/Annex Kingsbury,
<https://parentcoordinatorps188q.com/2019-2020-cell-phone-policy> (last visited Feb. 2, 2024).

19 ¹⁰⁴⁵ See, e.g., *Cell Phone Policy*, IN-Tech Academy MS/HS 368, <https://www.in-techacademy.org/cell-phone-policy> (last visited Feb. 2, 2024).

20 ¹⁰⁴⁶ See, e.g., *Cell Phone/Electronic Device Policy K-8*, P.S./I.S. 218, <https://psis218.org/policy-phone.html> (last visited Feb. 2, 2024).

21 ¹⁰⁴⁷ See, e.g., *Student Cell Phone Policy*, A. Phillip Randolph Campus High Sch.,
22 https://www.aprandolph.com/apps/pages/index.jsp?uREC_ID=905996&type=d&pREC_ID=1251759 (last
23 visited Feb. 2, 2024).

24 ¹⁰⁴⁸ See, e.g., *P.S. 24 School policy for use of cell phones, computing devices and portable music and
entertainment systems*, P.S. 24, <https://www.ps24brooklyn.com/device-policy> (last visited Feb. 2, 2024).

25 ¹⁰⁴⁹ See, e.g., *Cell Phone Policy*, Louis Armstrong Middle Sch.,
26 https://www.armstrong227q.com/apps/pages/index.jsp?uREC_ID=2050511&type=d&pREC_ID=2118993
(last visited Feb. 2, 2024).

27 ¹⁰⁵⁰ See *Digital Citizenship*, N.Y.C. Pub. Schs., [https://infohub.nyced.org/in-our-
schools/programs/digital-citizenship](https://infohub.nyced.org/in-our-schools/programs/digital-citizenship) (last visited Feb. 2, 2024).
28

1 Guidelines for Students Over 13, and Teacher and Parent Social Media Guides, respectively.¹⁰⁵¹ In
2 addition, NYC Public Schools has repeatedly been forced to take action and issue security
3 warnings addressing viral social media posts or challenges designed to compel dangerous
4 behavior spread via Defendants’ algorithms and encouraged by Defendants’ design features. In
5 such cases, NYC Public Schools takes affirmative steps to address with parents the potential risks
6 to student health and wellness that social media presents, and the importance of carefully
7 monitoring their children’s social media use.

8 849. Social media use by teens has recently been implicated in alarming increases in
9 dangerous and even deadly off-campus activity in New York City. One such dangerous type of
10 conduct known to be spreading through viral social media posts is “subway surfing.” Over the
11 past 3 years, teens in New York City have been observed and apprehended—and killed—riding
12 outside of subway cars in increasing numbers while in search of the dopamine high of “going
13 viral” with online social media likes. In 2022, the Metropolitan Transit Authority (“MTA”)
14 observed 928 people riding outside of subway cars in New York City—many of them subway
15 surfing on top of moving subway cars—representing a 366% increase over the number observed
16 the prior year. Sadly, with increased subway surfing has come increased deaths. Between 2018
17 and 2022, five teens were killed subway surfing. In 2023 alone, 5 young people—teenagers aged
18 13, 14, 15 and 16—were killed, and another 5 teens were injured, the youngest of which was only
19 12 years old. City officials have already recorded the first subway surfing death in 2024; the
20 victim was 14 years old.

21 850. The New York City Police Department (“NYPD”) has redeployed resources to try to
22 address this rapidly growing and increasingly deadly problem, including assigning 10 to 20 NYPD
23 Transit Bureau officers and 2 to 3 drone pilots (responsible for deploying 43 drones). In 2023, the
24 NYPD dedicated almost 300 hours of time to apprehend surfers, leading to 132 arrests, all but 7 of
25 them teenagers. Significantly, NYPD investigations have determined that the primary motivation

26 ¹⁰⁵¹ *The ESIFC and Common Sense Digital Citizenship Curriculum*, N.Y.C. Pub. Schs.,
27 <https://infohub.nyced.org/in-our-schools/programs/digital-citizenship/social-media> (last visited Feb.
28 6, 2024).

1 of subway surfers is to imitate the subway surfing videos they see on social media, and to collect
2 social media “likes.” An August 2023 story about teen subway surfers by New York Magazine
3 confirmed the role of social media platforms in driving teen surfing behavior: one surfer admitted
4 that he began surfing when he saw a surfing video on the “TikTok For You” page the platform’s
5 algorithms pushed to his TikTok account. Another proudly described how a video he posted of
6 himself subway surfing with the sky hazy and red with wildfire smoke got almost 6 million views
7 on TikTok, and brought him 100,000 followers. As the reporter noted:

8 Many [subway surfers] also record and share their surfs online, and by the
9 beginning of 2022, the videos began going viral. In New York, subway surfing
10 has been around since at least the 1980s. But a new generation of teens is drawn
11 in by the rush of seeing the reactions on TikTok and Instagram.¹⁰⁵²

11 851. The rise of deadly subway surfing incidents has also necessitated the urgent
12 deployment of resources by NYC Public Schools, NYPD, and the City’s Department of Youth and
13 Community Development (“DYCD”), in partnership with the MTA, to create a public service
14 campaign aimed at teens: *Subway surfing kills. Ride inside, stay alive.*

15 **b. New York City is facing a growing youth mental health crisis caused or**
16 **contributed to by the design and operation of Defendants’ social media**
17 **platforms.**

17 852. Over the past 10 or more years, a growing youth mental health crisis in the city has
18 become apparent. For example, there have been increases in the proportion of youth in New York
19 City who report experiencing anxiety, depression, and suicidal ideation, and who engage in self-
20 harm behavior.

21 853. According to the 2021 New York City Youth Risk Behavior Survey, over 38 percent
22 of all New York City high school students—and over 48 percent of girls—reported feeling sad or
23 hopeless almost every day for two or more weeks during the 12 months before the survey. Those
24 numbers represented a notable increase—42 percent overall, and 47 percent among girls—since
25

26
27 ¹⁰⁵² Joshua Needelman, *Why Subway Surfers Find It So Hard to Quit*, Curbed (Aug. 16, 2023),
28 <https://www.curbed.com/2023/08/subway-surfing-teenagers-social-media-quitting-mta.html>.

1 2011.¹⁰⁵³ Notably, the post-2011 increase was a marked departure from the previous trend, which
2 had seen feelings of sadness and hopelessness decreasing for more than a decade.

3 854. Similarly, in 2021 over 15 percent of New York City high school students reported
4 seriously considering attempting suicide during the 12 months before the survey compared to 12
5 percent reporting the same in 2011—a 34 percent increase.¹⁰⁵⁴ This post-2011 increase was
6 likewise a marked departure from the previous trend, which had been improving for more than a
7 decade.

8 855. Disturbingly, over 19 percent of all students—and 26.6 percent of girls—reported
9 engaging in self-harm such as cutting or burning themselves in 2021, up from 17.7 percent and 22
10 percent, respectively, in 2011.¹⁰⁵⁵

11 856. Even more tragic, 9.2 percent of New York City high school students reported
12 attempting suicide at least once during the 12 months before the 2021 survey.¹⁰⁵⁶

13 857. Younger children also report experiencing mental health issues in higher numbers.
14 According to a DOHMH survey, one in five New York City children ages 3 to 13 had one or more
15 mental, emotional, developmental, or behavioral problems in 2021.¹⁰⁵⁷ Similarly, in 2021, 8
16 percent of children ages 3 to 13 had a caregiver who was told their child had anxiety.¹⁰⁵⁸

17 858. According to a 2022 study of pediatric mental health emergency visits in five large
18 New York City academic medical centers published in the journal *Pediatrics*, rates of pediatric
19 mental health emergency visits have increased in all five medical centers.¹⁰⁵⁹ According to study

20 ¹⁰⁵³ *Youth Risk Behavior Surveillance System (YRBSS)*, CDC (Apr. 27, 2023), www.cdc.gov/yrebs.

21 ¹⁰⁵⁴ *Id.*

22 ¹⁰⁵⁵ *Id.* at 20, 72.

23 ¹⁰⁵⁶ *Id.*

24 ¹⁰⁵⁷ *Care, Community, Action: A Mental Health Plan for New York City* at 11, N.Y.C. (Mar. 2,
25 2023), <https://www.nyc.gov/assets/doh/downloads/pdf/mh/care-community-action-mental-health-plan.pdf>.

26 ¹⁰⁵⁸ *Id.*

27 ¹⁰⁵⁹ Deborah A. Levine *et al.*, *Pediatric Mental Health Emergencies During 5 COVID-19 Waves in*
28 *New York City*, 152(5) *Pediatrics* (Nov. 2023),
<https://publications.aap.org/pediatrics/article/152/5/e2022060553/194470/Pediatric-Mental-Health->
(footnote continued)

1 author Dr. Deborah Levine, youth mental health was already in a crisis before the Covid-19
2 pandemic, which only exacerbated underlying issues.¹⁰⁶⁰

3 859. The pandemic, and the corresponding increase in time youth spent on Defendants’
4 platforms, intensified the youth mental health crisis and the behavioral issues experienced by
5 adolescents in New York City. As use of social media platforms has increased due to manipulative
6 and addictive features—whose impact was exacerbated during the isolation of the pandemic—
7 there has been a marked increase in the number of youth in crisis, acting out, and in need of
8 mental health services in New York City.

9 860. Aligning with the increased number of students self-reporting mental health issues,
10 NYC Public Schools teachers also recognize student mental health as a significant, and growing,
11 issue. One teacher observed that “[c]onflicts over being excluded or bullied via social media
12 became routine. Students brought that tension into the classroom and hallways,” and “social media
13 wore down her students’ mental health.”¹⁰⁶¹

14 861. Providers that work with the City to provide mental health services to the City’s
15 youth have likewise seen a variety of ways that social media have harmed youth mental health.
16 While this sometimes takes the form of social media directly causing youth mental health
17 problems, the platforms can also exacerbate harm to mental health caused by other seemingly-
18 independent behaviors (such as in-person bullying), and social media can make it more difficult
19 for youth already experiencing depression or isolation to recover and improve.

20 862. For example, children in treatment for anxiety have reported that a major source of
21 anxiety is the omnipresent possibility that their words and actions can easily be video-recorded by
22 peers’ smartphone cameras and broadcasted via social media in a manner that humiliates them in

23
24 *Emergencies-During-5-COVID; see also Increases in Pediatric Mental Health Emergency Visits*
25 *Persist Throughout Pandemic*, Weil Cornell Med. Off. External Affs. (Oct. 20, 2023),
[https://news.weill.cornell.edu/news/2023/10/increases-in-pediatric-mental-health-emergency-visits-](https://news.weill.cornell.edu/news/2023/10/increases-in-pediatric-mental-health-emergency-visits-persist-throughout-pandemic)
[persist-throughout-pandemic.](https://news.weill.cornell.edu/news/2023/10/increases-in-pediatric-mental-health-emergency-visits-persist-throughout-pandemic)

26 ¹⁰⁶⁰ *Id.*

27 ¹⁰⁶¹ Rebecca Ruiz, *How social media in the classroom is burning teachers out*, Mashable (Sept. 16,
28 2023), [https://mashable.com/article/teacher-burnout-social-media-in-the-classroom.](https://mashable.com/article/teacher-burnout-social-media-in-the-classroom)

1 front of an audience of not only their immediate classmates but also many other youth—and not
2 just in the moment, but also well into the future. Because of this risk, many youth are less likely to
3 let their guard down, take social risks, or engage in free and adventurous play. This not only
4 deprives them of the immediate well-being benefits of free and adventurous play, it also hinders
5 their social-emotional development and can contribute to a self-reinforcing cycle of isolation,
6 anxiety, and depression.

7 863. As described above, Defendants’ design features cause and/or contribute to these
8 mental health problems. In addition, Defendants’ algorithms and recommendation systems, which
9 are designed to pursue maximal engagement and keep youth on the platforms for as long as
10 possible, nudge youth toward and encourage youth to view material that is harmful to their mental
11 health, contributing to depression, anxiety, eating disorders, and even radicalization and violence.

12 864. The harms to youth mental health that are caused or exacerbated by social media can
13 be magnified in youth with severe symptoms, such as psychiatric crises. According to providers of
14 mental health services, youth in severe crisis have often grown increasingly disconnected over
15 time from in-person peers and from adults in their lives, and have instead become reliant on social
16 media as their primary (and eventually, only) social outlet. This has made them more and more
17 vulnerable to the addictive design features of Defendants’ social media platforms. If such youth
18 are chronically absent from school, it is difficult to provide school-based mental health services to
19 break this cycle. Often, the intensity of their attachment to social media and to their phones sparks
20 intense, and sometimes violent, family conflict.

21 865. The increased need for youth mental health services has also adversely impacted the
22 educational experience for NYC Public Schools staff, teachers, students, and their families. Staff
23 and teachers cannot ignore students who are in crisis and need to support those students, even if
24 this comes at the expense of the educational goals and experience for the larger student body.
25 Classrooms are shared spaces, and students learn within them as a group. Increases in anxiety,
26 depression, suicidal ideation, and other mental health crises impact both the students suffering
27 from these problems and the other students, teachers, and staff who need to interact with these
28 students. Further, the distraction social media causes in the classroom impacts all students

1 regardless of whether they personally use social media.

2 866. NYC Public Schools staff experience secondary trauma and burnout associated with
3 responding to students in crisis. “Managing the devices, the students' ability to focus, and the
4 complex emotions attached to phone and social media use has contributed to, at times, feeling
5 burnt out and demoralized. ‘It's completely exhausting,’ [said one NYC Public Schools teacher] of
6 trying to help students succeed in school under these circumstances.”¹⁰⁶²

7 867. In response to the youth mental health crisis and its impact on NYC Public Schools,
8 the City has launched Let’s Talk NYC, which includes a self-guided online training that prepares
9 high school staff, irrespective of role, to become mental health allies and learn how to have
10 supportive conversations about mental health with students, identify student needs, connect
11 students to services and resources, navigate the referral process, and take care of their own mental
12 health.¹⁰⁶³

13 868. In June 2023, the City, through its Commissioner of Health, Dr. Aswin Vasana,
14 convened leaders from New York City and around the country—including leaders from education,
15 and young people themselves—to try to find solutions to the youth mental health crisis. At the
16 event, one young person shared, “I do believe that social media has now become one of the main
17 parts of culture within youth [Social media] can become one of the main things that can lead
18 you into a spiral of depression. And I do think it can become very addicting as well.” Another
19 young person stated, “Social media is something that we’re raised with My experience with
20 social media – I am a victim of bullying, cyberbullying ... it scares me because I’m an older sister
21 of three. It scares me to see that my thirteen year old sister is on TikTok, that my seven year old
22 sister is on TikTok Are they seeing the same things I am seeing? I completely support the
23

24 ¹⁰⁶² *Id.*

25 ¹⁰⁶³ Press Release, *A Recovery for All of Us: Mayor’s Office of Community Mental Health, NYC*
26 *Department of Education, NYC Department of Health, The Jed Foundation, and Ogilvy Health*
27 *launch “Let’s Talk NYC” campaign to support mental health of high school students, N.Y.C.*
28 Mayor’s Off. Cmty. Mental Health (May 6, 2021),
<https://mentalhealth.cityofnewyork.us/news/announcements/lets-talk>.

1 change in algorithm.”¹⁰⁶⁴

2 869. Out of the convening, the City has developed a *Framework for Action* that would
3 advocate for reforms, and identify resources needed by families and communities to protect young
4 people, promote well-being, and limit unsafe exposure to what Dr. Vasan has identified as an
5 “environmental toxin”—unregulated social media.¹⁰⁶⁵

6 870. Just last month, recognizing the continuing urgency of the moment, Dr. Vasan issued
7 a Commissioner’s Advisory officially designating social media a public health hazard in New
8 York City, and providing guidance to New Yorkers on steps to take to protect their children from
9 harm by, *inter alia*, implementing tech-free times and places for their children; modeling healthy
10 social media use; creating a family social media plan that prioritizes mental health; and
11 encouraging children to change settings to decrease notifications and increase privacy, to monitor
12 their emotions during social media use, and to share their concerns about social media and mental
13 health with trusted adults in their lives.¹⁰⁶⁶

14 **3. NYC Plaintiffs are on the frontlines of the youth mental health crisis in New**
15 **York City, and provide a wide range of youth mental health services but**
16 **continue to be faced with increasing need.**

17 **a. NYC Plaintiffs offer a comprehensive network of mental health services**
18 **for New York City youth**

19 871. As primary providers of mental health services to children and adolescents in New
20 York City, Plaintiffs the City, NYC Public Schools, and NYC Health + Hospitals, individually
21 and in partnership with each other, have found themselves on the frontlines of the struggle to
22 address the youth mental health crisis in the city. The NYC Plaintiffs see firsthand the extent of
the crisis, and have been responsible for the development, design, operation, and management of a

23 ¹⁰⁶⁴ *NYC’s Role in the National Crisis of Social Media & Youth Mental Health*, N.Y.C. (June 8,
24 2023), <https://www.youtube.com/watch?v=TXKk0dLcfvY>.

25 ¹⁰⁶⁵ *New York City’s Role in the National Crisis of Social Media and Youth Mental Health:*
26 *Framework for Action*, N.Y.C. Dep’t Health & Mental Hyg. (Jan. 2024),
27 <https://www.nyc.gov/site/doh/health/health-topics/youth-mental-health-and-social-media.page>.

28 ¹⁰⁶⁶ *Advisory from the Commissioner of Health and Mental Hygiene of the City of New York*, N.Y.C.
(Jan. 24, 2024), <https://www.nyc.gov/assets/doh/downloads/pdf/notice/2023/coh-advisory-social-media.pdf>.

1 complex and comprehensive network of public mental health programs and services available for
2 children and adolescents in New York City.

3 872. The robust network of youth mental health services provided by NYC Plaintiffs can
4 be broadly divided into school-based and non-school-based youth mental health services.

5 (i) **School-based youth mental health services provided by NYC**
6 **Plaintiffs**

7 873. The NYC Plaintiffs devote significant resources—in terms of funding, employees,
8 and time—to providing school-based mental health services to students and youth across the city.

9 874. A range of school-based mental health services provided in NYC Public Schools are
10 overseen by the Office of School Health (“OSH”), an office jointly funded and operated by NYC
11 Public Schools and the City’s DOHMH. Within OSH, the School Mental Health program
12 (“SMH”) connects each of the NYC Public Schools to the broader City mental health system,
13 based upon the needs of each school. Utilizing a three-tier model of services, SMH partners with
14 Community Based Organizations (“CBOs”) and medical providers, including those from NYC
15 Health + Hospitals, to identify need and provide preventative and clinical mental health and
16 supportive services.

17 875. Specifically, SMH Managers are responsible for the implementation of mental health
18 partnerships and programs to facilitate access to quality mental health services onsite in schools.
19 SMH Managers each manage portfolios of schools that receive funding and provide services
20 through different mechanisms, including the School Mental Health Prevention and Intervention
21 Program (described below) and Community School funding.

22 876. NYC Public Schools provides school mental health interventions to students across a
23 multi-tiered system of support. The three tiers are:

- 24 a. Tier 1: Universal Social-Emotional Learning and Wellness Programs. The entire
25 student population receives universal social-emotional learning programming,
26 intervention, and support to meet the social, emotional, developmental, behavioral
27 and mental health needs of each school.
- 28 b. Tier 2: Selective Mental Health Supports. Students who are at risk for developing a

1 clinical diagnosis (generally 10-15% of the student population) receive services
2 aimed at preventing risk factors from developing further.

- 3 c. Tier 3: Targeted Clinical Services. Students with identified or diagnosed mental
4 health issues (generally 0-5% of the student population) receive intensive,
5 individualized, and specialized interventions and support to address identified
6 emotional, behavioral, and mental health needs. Tier 3 services are often high-
7 intensity and long-duration.¹⁰⁶⁷

8 877. The Tier 1 mental health services offered by NYC Public Schools to its students
9 include:

- 10 a. School guidance counselors trained to service the entire K-12 school community
11 including students, families, staff, and school leadership. School counselors work
12 with school administrators in advocating for programs and services that positively
13 impact student academic success in alignment with New York State Learning
14 Standards, social emotional development, and higher education and career readiness.
15 As of February 2023, NYC Public Schools had 3,191 guidance counselors on staff,
16 all but 36 of whom are employed full-time. This represents a ratio of 1 guidance
17 counselor for every 272 students. Within high schools, the ratio improves to
18 1:190.¹⁰⁶⁸
- 19 b. A Social-Emotional Learning Screener. Through its Office of Community Supports
20 and Wellness, NYC Public Schools implemented a strengths-based social-emotional
21 learning screener (the Devereux Student Strengths Assessment, or “DESSA”) in the
22 2021-2022 school year. The screener is a tool to advance implementation of multi-
23 tiered social emotional and mental health support in schools, building on historic
24

25 ¹⁰⁶⁷ *Mental Health*, N.Y.C. Pub. Schs., <https://www.schools.nyc.gov/school-life/health-and-wellness/mental-health> (last visited Jan. 9, 2024).

26 ¹⁰⁶⁸ *Report on Guidance Counselors, Pursuant to Local Law 56 of 2014*, N.Y.C. Dep’t Educ. (Feb.
27 15, 2023), https://infohub.nyced.org/docs/default-source/default-document-library/guidancecounselorreportandsummaryfeb_2023.pdf.

1 investments NYC Public Schools has made over the past several years. By
2 administering the screener and analyzing corresponding screener data, schools are
3 able to identify students' social-emotional competencies, identify students who may
4 benefit from additional support, and identify opportunities to strengthen the
5 foundational support provided to all students.

6 c. Social-Emotional Learning Curriculum. In partnership with National University
7 System's Harmony program, NYC Public Schools offers social-emotional learning
8 curriculum and workshops to elementary schools to help students develop social and
9 emotional skills to succeed academically. Providing students with instruction in
10 social-emotional skills serves as both an overarching prevention strategy and as a
11 primary intervention strategy, especially for children who will benefit significantly
12 from an expanded "toolkit" of responses that includes appropriate, pro-social
13 strategies for effectively interacting with others. Harmony is rooted in helping
14 students build relationship skills through the lenses of diversity and inclusion,
15 empathy and critical thinking, problem solving, communication, and peer
16 relationships.

17 d. RULER, an evidence-based approach to social and emotional learning developed at
18 the Yale Center for Emotional Intelligence. RULER supports entire school
19 communities in understanding the value of emotions, building the skills of emotional
20 intelligence, and creating and maintaining a positive school climate. This program
21 aims to infuse the principles of emotional intelligence into the immune system of
22 schools, enhancing how students learn, teachers teach, families parent, and leaders
23 lead.

24 878. The Tier 2 mental health services offered by NYC Public Schools to its students
25 include:

26 a. The School Mental Health Program. This program supports schools' efforts to
27 promote social and emotional well-being by building supportive environments and
28 strengthening family and community ties. The SMH Managers, working at the

1 school level, support schools by creating school-wide Mental Health Workplans,
2 offering parent workshops, creating linkages to community mental health providers,
3 providing staff trainings, supplementing some selective level services for students,
4 and participating in team meetings addressing crisis intervention and consolidated
5 plans. SMH Managers also offer crisis intervention and post-intervention services for
6 any school-wide crisis, as needed, and participate in the school’s student support
7 teams for consultations and referrals.

8 b. The School Mental Health Prevention and Intervention Program (“SMHPIP”).
9 SMHPIP works at the district and school level to design and implement mental
10 health programming that meets the needs of students in NYC Public Schools. The
11 SMHP also oversees the services provided in schools by contracted CBOs. In the
12 2022/2023 school year, there were 43 schools (serving 57,553 students) that had
13 onsite CBO providers through the Prevention and Intervention Program.

14 879. The Tier 3 mental health services made available to NYC Public Schools students
15 include:

16 a. School-Based Mental Health Clinics. Licensed by the New York State Office of
17 Mental Health, these “Article 31”¹⁰⁶⁹ clinics, overseen by SMH, provide individual,
18 family and group therapies; crisis and psychiatric assessments; case management;
19 school community outreach; and 24-hour crisis coverage for students. In the
20 2022/2023 school year, there were 331 schools in 221 buildings (some of which
21 contain multiple co-located schools) with School-Based Mental Health Clinics.
22 These clinics serve 171,852 students.

23 b. School-Based Health Centers with mental health services. Licensed by the New
24 York State Department of Health, these “Article 28”¹⁰⁷⁰ centers provide
25 comprehensive health services such as physical exams, vaccinations and emergency
26

27 ¹⁰⁶⁹ Article 31 clinics are licensed under Article 31 of the New York Mental Hygiene Law.

28 ¹⁰⁷⁰ Article 28 clinics are licensed under Article 28 of the New York Public Health Law.

1 care. A subset also provide mental health services and support. In the 2022/2023
2 school year, there were 336 schools (serving 148,240 students) with School-Based
3 Health Centers.

4 c. The Mental Health Continuum. This is a partnership between NYC Public Schools,
5 DOHMH, NYC Health + Hospitals and Advocates for Children, which seeks to
6 increase rapid access to mental health care in schools through telehealth, school
7 based clinical services, or onsite outpatient services. This program currently partners
8 NYC Health + Hospitals with 50 schools with no current on-site mental health
9 services to establish satellite clinics in schools in the South Bronx and Central
10 Brooklyn, and to provide rapid access to existing Health + Hospitals clinics for those
11 students where a school-based clinic does not exist.¹⁰⁷¹

12 d. School Response Team Program. The School Response Team Program, managed by
13 DOHMH's Bureau of Child, Youth, and Families, supports schools so they can
14 better meet the mental health needs of their students. Under the supervision of the
15 CBOs contracted by the Bureau, the School Response Teams conduct mental health
16 assessments, make referrals to needed community-based mental health and social
17 services, and engage parents through outreach.

18 e. Central Crisis Response Team. A central team of clinical social workers is available
19 to assist schools when responding to students in emotional distress, as well as
20 provide professional learning citywide for social workers, school counselors, and
21 crisis teams.

22 880. Certain mental health services offered by NYC Public Schools also operate across
23 multiple tiers. For example:

24 a. School-based social workers. Social workers provide direct service to students
25 through individual and group counseling, and support their school's implementation

26 ¹⁰⁷¹ Reema Amin & Alex Zimmerman, *NYC's budget deal restores some education programs*,
27 Chalkbeat N.Y. (June 29, 2023), [https://www.chalkbeat.org/newyork/2023/6/29/23779027/nyc-
28 budget-deal-education-cuts-schools-child-care-mental-health/](https://www.chalkbeat.org/newyork/2023/6/29/23779027/nyc-budget-deal-education-cuts-schools-child-care-mental-health/).

1 of proactive social-emotional learning and mental health programming. Social
2 workers are also able to provide more intensive clinical services for students with
3 greater needs. As of February 2023, NYC Public Schools had 1,951 social workers
4 on staff, all but 9 of whom are employed full-time. When the joint presence of
5 guidance counselors and social workers is considered, NYC Public Schools have a
6 ratio of 1 guidance counselor or social worker for every 169 students across all
7 schools. Within high schools, the ratio improves to 1:131.¹⁰⁷²

8 b. The Community School Mental Health Program incorporates academics with health
9 and mental health services, social services, expanded learning opportunities and
10 family resources. Through the Office of School Health, SMH managers work with
11 community schools to assess the mental health needs of each school, connect them
12 with the appropriate providers offering educators and families a range of mental
13 health interventions needed within a given school, and create partnerships with
14 community mental health providers. SMH managers implement and provide quality
15 oversight of onsite mental health programming offered by different providers. In
16 2022/2023, there were 549 schools (serving 57,553 students) who had onsite CBO
17 providers through the Community School Mental Health Program.

18 881. To summarize, as described above, in the 2022/2023 school year, NYC Public
19 Schools employed 3,191 guidance counselors, 1,951 social workers, and there were 331 schools
20 with School-Based Mental Health Clinics, 336 schools with School-Based Health Centers, and
21 592 schools whose students receive on-site services from a CBO.

22 **(ii) Non-schools-based youth mental health services provided by NYC**
23 **Plaintiffs**

24 **(1) Services led, coordinated, and/or provided by the City**

25 882. The NYC Plaintiffs' commitment to addressing the youth mental health crisis goes

26 ¹⁰⁷² *Report on Guidance Counselors, Pursuant to Local Law 56 of 2014*, N.Y.C. Dep't Educ. (Feb.
27 15, 2023), https://infohub.nyced.org/docs/default-source/default-document-library/guidancecounselorreportandsummaryfeb_2023.pdf.
28

1 well beyond their school-based programming and services. DOHMH takes a primary role in
2 coordinating the youth mental health services available to New York City youth outside of NYC
3 Public Schools. For example, in order to simplify for New Yorkers the process of accessing
4 mental help services and to ensure that youth with serious mental health challenges can access the
5 services they need, DOHMH operates a Children’s Single Point of Access (“CSPOA”).

6 883. DOHMH also oversees the following programs and services which provide mental
7 health support to young New Yorkers:

- 8 a. Children’s Mobile Crisis Teams. Children’s Mobile Crisis Teams, pursuant to
9 contracts managed by DOHMH’s Bureau of Child, Youth and Families and
10 supervised by CBOs contracted by the Bureau, provide short-term emergency crisis
11 intervention services to children and youth (newborn to age 21) until clients can be
12 assessed for ongoing behavioral health services, dependent on individual needs.
13 Crisis teams consisting of a social worker/mental health clinician and a family peer
14 advocate respond to youth in community settings throughout the five boroughs.
- 15 b. NYC Family and Youth Peer Support (“FYPS”) Services and Alliances. FYPS
16 services, provided by peers with lived experience, are available for youth and for
17 families of children (newborn to age 24) who are not insured for such services,
18 whether because they do not have Medicaid, or because the activities themselves are
19 unbillable. DOHMH provides these services through contracts with CBOs. Youth
20 peers—young people who have experienced social, emotional, developmental,
21 substance abuse, or behavioral challenges—provide emotional support, information,
22 referrals to services or resources, and skill development.
- 23 c. Non-Medicaid Care Coordination. This service, provided by DOHMH through
24 contracts with CBOs, develops a comprehensive plan of care for children and youth
25 (newborn to age 21) who have a diagnosis of serious emotional disturbance but do
26 not have Medicaid, in response to their physical and behavioral health needs and
27 their and their family’s goals.
- 28 d. High Fidelity Wraparound (“HFW”). This service, provided by DOHMH through

1 contracts with CBOs, provides a HFW team—a care manager, family peer, and
2 youth peer—to youth ages 12 to 21 with a serious emotional disturbance diagnosis,
3 high-risk behaviors, and involvement in multiple child-serving systems, in order to
4 facilitate the creation of a plan of care to help prioritize and meet the youth’s
5 behavioral health needs.

- 6 e. Adolescent Skill Centers. These centers—for adolescents ages 15 to 21 with mental
7 health challenges—are staffed by CBOs pursuant to DOHMH contracts. There is at
8 least one center in each borough available to provide educational and vocational
9 support and life skills in order to support adolescents’ transition to adulthood.

10 884. In addition to the in-person programs and services described above, DOHMH
11 recently led the City’s launch of NYC Teenspace, a mental health support program available free
12 of charge to any teenager between 13 to 17 living in New York City.¹⁰⁷³ To provide this service,
13 the City entered into a three-year, \$26 million contract with Talkspace.¹⁰⁷⁴ Dr. Ashwin Vasani, the
14 City’s Health Commissioner, explained that NYC Teenspace was created because of the alarming
15 levels of distress among teens, and as a way to ensure that all teens in the city, even those not
16 attending NYC Public Schools, could have access to free, online mental health services, on-
17 demand, ensuring they can be quickly connected to a therapist.¹⁰⁷⁵ Since its November 15, 2023
18 launch, more than 2,000 New York City teens have already made use of NYC Teenspace to
19 connect with a therapist.

20 885. DOHMH also manages NYC 988—formerly known as NYC WELL—a free Suicide

21 ¹⁰⁷³ See *NYC Teenspace*, N.Y.C. Health, [https://www.nyc.gov/site/doh/health/health-](https://www.nyc.gov/site/doh/health/health-topics/teenspace.page)
22 [topics/teenspace.page](https://www.nyc.gov/site/doh/health/health-topics/teenspace.page) (last visited Feb. 13, 2024); see also Ellen Barry & Christina Caron, *New York*
23 *City Is Offering Free Online Therapy to Teens: Will It Work?* N.Y. Times (Dec. 15, 2023),
<https://www.nytimes.com/2023/12/15/health/free-therapy-teens-nyc.html>.

24 ¹⁰⁷⁴ In the Executive Budget for fiscal year 2024, New York City is spending \$9 million to launch
25 NYC Teenspace. See Press Release, *Mayor Adams Releases Executive Budget for Fiscal Year 2024,*
26 *Largest Executive Budget in City History*, N.Y.C. Off. Mayor (Apr. 26, 2023),
[https://www.nyc.gov/office-of-the-mayor/news/292-23/mayor-adams-releases-executive-budget-](https://www.nyc.gov/office-of-the-mayor/news/292-23/mayor-adams-releases-executive-budget-fiscal-year-2024-largest-executive-budget-city-history#/0)

27 ¹⁰⁷⁵ *Id.* See also *NYC teenspace*, Talkspace, <https://www.talkspace.com/coverage/nyc> (last visited
28 Jan. 22, 2024).

1 and Crisis Lifeline, through which New Yorkers of any age experiencing mental health crises can
2 speak to a counselor via phone, text, or chat to get access to mental health services or referrals at
3 any time of the day or night, in over 200 languages.¹⁰⁷⁶

4 886. In 2021, the City launched the Behavioral Health Emergency Assistance Response
5 Division (“B-HEARD”).¹⁰⁷⁷ B-HEARD is the City’s health-centered response team for 911
6 mental health calls, comprised of New York City Fire Department (“FDNY”) Emergency Medical
7 Technicians (“EMTs”)/paramedics, and mental health professionals from NYC Health +
8 Hospitals. The B-HEARD Teams use their physical and mental health expertise and experience in
9 crisis response to de-escalate emergency situations and provide immediate care in response to a
10 range of behavioral health problems including suicidal ideation. B-HEARD is an option for
11 individuals ages 6 and older, and B-HEARD teams also respond to 911 calls from schools for
12 students experiencing mental health crises. Since it was established, the number of calls received
13 has climbed from 42 in 2021 to 666 in 2023. Moreover, the proportion of those calls that relate to
14 children and adolescents in crisis receiving a mental health assessment has also climbed steadily,
15 from 9.5 percent in 2021, to 14 percent in 2022, to 20 percent in 2023.

16 **(2) Services led, coordinated, and/or provided by NYC Health**
17 **+ Hospitals**

18 887. Plaintiff NYC Health + Hospitals offers a wide variety of mental health services and
19 programs for New York City youth. As a public hospital system, NYC Health + Hospitals serves
20 as the health care safety net for the uninsured and underserved in New York City, and is the
21 largest provider of care to the most vulnerable New Yorkers: Medicaid patients, mental health
22 patients, and the uninsured. Notably, providing youth mental health services frequently means that
23 NYC Health + Hospitals is not fully compensated for the services it provides. As the Mayor’s

24 ¹⁰⁷⁶ See 988 *Suicide & Crisis Lifeline*, N.Y.C. Dep’t Health & Mental Hyg.,
25 <https://nycwell.cityofnewyork.us/en/> (last visited Jan. 8, 2024); see also, Press Release, *Health*
26 *Department Launches 988 Campaign*, N.Y.C. Dep’t Health & Mental Hyg. (Oct. 10, 2023),
<https://www.nyc.gov/site/doh/about/press/pr2023/health-department-launches-988-campaign.page>.

27 ¹⁰⁷⁷ *Re-imagining New York City’s mental health emergency response*, N.Y.C. Mayor’s Off. Cmty.
28 Mental Health, <https://mentalhealth.cityofnewyork.us/b-heard> (last visited Jan. 8, 2024).

1 Office of Community Mental Health noted in its 2023 Annual Report, the reimbursement rates
2 often do not cover the providers’ actual costs of delivering service, especially for children and
3 families. Care for children typically involves the complexity of families, which can increase the
4 intensity and time needed for cases.¹⁰⁷⁸

5 888. Services and programs provided to New York City youth by NYC Health +
6 Hospitals include:¹⁰⁷⁹

- 7 a. Pediatric Emergency Departments. Pediatric Emergency Departments serve as a
8 point of entry for children who may be experiencing a psychiatric emergency, for
9 assessment and connection to appropriate inpatient or outpatient care.
- 10 b. Comprehensive Psychiatric Emergency Services. NYC Health + Hospitals’ Bellevue
11 Hospital offers the only Child Comprehensive Psychiatric Emergency Program
12 (“CPEP”) in New York State. The CPEP provides emergency psychiatric services
13 for children, including triage and referral, comprehensive psychiatric assessment,
14 stabilization, extended observation, and linkage to inpatient admission or outpatient
15 services.
- 16 c. Child Crisis Intervention Services (“CCIS”). This program embeds child specialist
17 clinical social workers in emergency rooms to assess children or adolescents
18 presenting to emergency departments in a crisis. A crisis stabilization plan is created,
19 with case management and linkages to care, with patient follow up after discharge.
20 This program is funded by the New York State Office of Mental Health and
21 DOHMH provides programmatic oversight and contract management.
- 22 d. Child and Adolescent Consult and Liaison for Emergency Departments. This
23 program provides psychiatric consultation, assessment and treatment to patients in

24 ¹⁰⁷⁸ *2023 Annual Report on Critical Gaps in the Mental Healthcare System in New York City,*
25 *Pursuant to Local Law 155* at 9, N.Y.C. Mayor’s Off. Cmty. Mental Health (2021),
26 [https://mentalhealth.cityofnewyork.us/wp-content/uploads/2023/02/2023-OCMH-Annual-](https://mentalhealth.cityofnewyork.us/wp-content/uploads/2023/02/2023-OCMH-Annual-Report.pdf)
26 [Report.pdf](https://mentalhealth.cityofnewyork.us/wp-content/uploads/2023/02/2023-OCMH-Annual-Report.pdf).

27 ¹⁰⁷⁹ *Mental Health Services*, N.Y.C. Health + Hosps.,
28 <https://www.nychealthandhospitals.org/services/mental-health-services/> (last visited Jan. 8, 2024).

1 emergency departments.

- 2 e. Inpatient Services. Services are provided to patients who require inpatient care in
3 order to stabilize an acute psychiatric illness.
- 4 f. Outpatient Clinics. These are Article 31 clinics providing outpatient services for
5 children and adolescents including individual, group, and family therapy provided by
6 psychologists or social workers, and medication management services from a
7 psychiatrist or nurse practitioner.
- 8 g. Partial Hospitalization Program (“PHP”). This is a NYC Health + Hospitals-based 4-
9 6 week outpatient program in which patients receive intensive individual, family and
10 group counseling along with medication management. Patients also receive on-site
11 educational services through a NYC Public Schools Special Education School that is
12 onsite.
- 13 h. Developmental Evaluation Clinic. This clinic provides comprehensive
14 developmental evaluations including psychosocial evaluations, neurological, and
15 speech and language evaluations, and ongoing medication treatment, speech and
16 language therapy, and individual therapy for children with developmental delays.
- 17 i. First Break Inpatient Unit. First Break is an inpatient psychiatric Unit for patients
18 age 16-23 who experience their first episode of psychosis.
- 19 j. On Track. This is a program for patients age 16-30 designed to help individuals with
20 a psychotic disorder who have experienced their first psychosis experience within
21 the last year. It provides medication management, employment and educational
22 support, substance abuse treatment, suicide prevention, and family intervention and
23 support.
- 24 k. Home Based Crisis Intervention (“HBCI”). HBCI is an intensive program which
25 assists families by providing an alternative to hospitalization. HBCI provides short-
26 term, intensive in-home crisis intervention and support services by a mental health
27 interventionist or psychiatric consultant—including 24/7 access to a counselor—to
28 families in crisis due to the imminent risk of a child or adolescent (ages 5 to 21

1 years) being admitted to a psychiatric hospital. This service is offered by both NYC
2 Health + Hospitals and DOHMH, which manages contracts with CBOs for the HBCI
3 teams.

4 889. The demand for NYC Health + Hospitals' youth mental health services has continued
5 to grow, mirroring the growing youth mental health crisis in New York City. For example, in
6 2023, NYC Health + Hospitals' clinical staff had 5,443 encounters with youth 10-18 years old
7 seeking mental health services in its emergency departments and CPEPs; 985 mental health
8 inpatient admissions; 46,396 encounters for mental health services at its 12 non-school based child
9 and adolescent outpatient clinics; and 209 encounters at its 5 school-based satellite outpatient
10 mental health clinics.

11 890. In addition, through its Partial Hospitalization Program, NYC Health + Hospitals
12 provides critical, intensive outpatient treatment to growing numbers of young people in crisis. In
13 2023, for example, PHP served New York City youth in crisis 4,256 times at its two participating
14 hospitals in Manhattan and Queens.

15 **b. NYC Plaintiffs' ability to provide these services has been greatly**
16 **undermined by Defendants' conduct.**

17 891. Given their roles and responsibilities to provide youth mental health services in New
18 York City, NYC Plaintiffs have been impacted by the ongoing youth mental health crisis
19 substantially caused and contributed to by Defendants. For example, over the past years, as a
20 result of the growing youth mental health crisis, NYC Plaintiffs have been forced to increase,
21 reconfigure, expand and in some cases, restructure the mental health services they offer to New
22 York City youth in response to the increased number of youth exhibiting mental health issues. As
23 a result, NYC Plaintiffs have borne the additional costs of the increased need for youth mental
24 health services and have been significantly impacted.

25 892. In an attempt to address the decline in students' mental, emotional, and social health,
26 and as described above, NYC Plaintiffs, and in particular, NYC Public Schools, have been forced
27 to divert resources from their primary educational mission and/or expend additional resources to:

28 a. hire additional personnel, including counselors, social workers, mental

1 health therapists, and behaviorists to address social, emotional, and mental health
2 issues;

3 b. re-direct resources to address mental, emotional, and social health
4 issues;

5 c. increase training for teachers and staff to identify students
6 experiencing issues affecting their mental, emotional, and social health;

7 d. increase training for counselors to provide students with cognitive
8 behavioral therapy;

9 e. develop digital citizenship and social media guidelines to educate
10 students and parents about appropriate social media use;

11 f. educate teachers, staff, and members of the community about the
12 harms caused by Defendants' products;

13 g. develop lesson plans to teach students about the dangers of using
14 Defendants' platforms, appropriate social media use, and digital citizenship;

15 h. create and distribute public and educational materials on social,
16 emotional, and mental health for youth and families;

17 i. address disciplinary issues stemming from students' use of
18 Defendants' platforms; and

19 j. address harmful conduct occurring on, and recommended and
20 encouraged by the design of, Defendants' platforms, including cyberbullying and
21 viral social media challenges.

22 893. To address the growing youth mental health crisis, NYC Plaintiffs have had to
23 expend additional resources. For example, in addition to the vast array of youth mental health
24 programs and services described above, NYC Plaintiffs continue to build out capacity to provide
25 and connect children and youth to mental health care. For example, through the Mayor's 2023
26 Care, Community, Action: A Mental Health Plan, the City is working on rolling out additional
27 mental health resources in partnership with others, including:

28 a. Providing suicide prevention training for adults in schools, including

1 nurses, teachers and safety staff, to respond appropriately to the needs of students;

2 b. Expanding school-based mental health clinics through a partnership
3 among the NYC Public Schools, DOHMH and the New York State Office of Mental
4 Health;

5 c. Offering crisis intervention through school-based staff, and providing
6 de-escalation training for safety agents to promote appropriate referrals; and

7 d. Launching a new, comprehensive citywide survey on youth mental
8 health to understand what supports youth ages 13 to 17 use for their mental health
9 needs and what barriers they face in accessing help.

10 894. All of the resources expended by NYC Plaintiffs are crucial to addressing the public
11 health harms caused by the youth mental health crisis, but even more is needed. For instance, a
12 2021 survey of 1,300 youth ages 14 to 24 across all five boroughs of New York City reported that
13 35 percent of respondents wanted or needed mental health services from a professional, but only
14 42 percent of those that wanted or needed such help reported receiving such services.¹⁰⁸⁰ Access to
15 services is also compounded by other societal factors and inequities. For example, among youth
16 with mental health needs in New York City, males are less likely to be connected to mental
17 healthcare, across all races and ethnicities.¹⁰⁸¹

18 895. Of particular concern is the fact that a number of NYC Plaintiffs' recent investments
19 in youth mental health resources were funded by grants and other time limited funding sources
20 that will soon expire. For example, with the help of the American Rescue Plan Act, NYC Public
21 Schools was able to make a \$77M investment to hire additional full-time social workers to support
22 students in 520 schools with high need—this funding allowed NYC Public Schools to increase the
23 number of full-time social workers by 443. American Rescue Plan funding expires at the end of
24 the fiscal year, leaving NYC Public Schools needing to secure some other source of funding in

25
26 ¹⁰⁸⁰ *From Innovation to Integration*, N.Y.C. Mayor's Off. Cmty. Mental Health, <https://mentalhealth.cityofnewyork.us/integration> (last visited Jan. 8, 2024).

27 ¹⁰⁸¹ *Mental Health Data Dashboard*, N.Y.C. Mayor's Off. Cmty. Mental Health, <https://mentalhealth.cityofnewyork.us/dashboard/> (last visited Jan. 21, 2024).
28

1 order to maintain its counselor and social worker to student ratio.

2 896. Ultimately, NYC Plaintiffs require significant and long-term funding to address the
3 nuisance Defendants have created and amplified. Such funding should not come at the expense of
4 New York City residents, nor fall at the foot of the public. Rather, Defendants must bear the
5 burden of remedying their wrongs. It is time, as President Biden declared, to get “all Americans
6 the mental health services they need”¹⁰⁸² and “hold social media companies accountable[.]”¹⁰⁸³

8 V. CAUSES OF ACTION

9 COUNT ONE — NEW YORK PUBLIC NUISANCE

10 897. NYC Plaintiffs incorporate by reference all preceding paragraphs.

11 898. “A public nuisance ‘consists of conduct or omissions which offend, interfere with or
12 cause damage to the public in the exercise of rights common to all, in a manner such as to offend
13 public morals, interfere with the use by the public of a public place or endanger or injure the
14 property, health, safety or comfort of a considerable number of persons.’” *City of New York v.*
15 *Beretta U.S.A. Corp.*, 315 F. Supp. 2d 256, 276 (E.D.N.Y. 2004) (quoting *Copart Indus., Inc. v.*
16 *Consol. Edison Co.*, 41 N.Y.2d 564, 362 (1977)).

17 899. Defendants, through their conduct designing, developing, marketing, supplying,
18 promoting, advertising, operating and distributing their social media platforms in the manner
19 described above, have created, caused and contributed to the youth mental health crisis in New
20 York City, causing damage to the public’s health and safety, interfering with the use of public
21 places, including schools, and endangering or injuring the health, safety, comfort or welfare of a
22 considerable number of persons, including youth.

23 900. Defendants’ conduct has so impacted youth mental health that the public nuisance
24 caused in substantial part by Defendants’ dangerous and addictive social media platforms is

25 _____
26 ¹⁰⁸² President Joseph R. Biden, *State of the Union Address* (Mar. 1, 2022),
<https://www.whitehouse.gov/state-of-the-union-2022/>.

27 ¹⁰⁸³ President Joseph R. Biden, *State of the Union Address* (Feb. 7, 2023),
28 <https://www.whitehouse.gov/state-of-the-union-2023/>.

1 commonly referred to as the “youth mental health crisis.” The Surgeon General has warned that,
2 “We are in the middle of a national youth mental health crisis, and I am concerned that social
3 media is an important driver of that crisis – one that we must urgently address.”¹⁰⁸⁴ The City’s
4 Commissioner of Health has likewise identified the youth mental health crisis as a matter of
5 urgent public concern in New York City, and social media platforms as a contributing factor.¹⁰⁸⁵
6 This crisis has caused severe disruption to the social order and the public peace, order and safety;
7 it is ongoing and it is producing long-lasting and permanent damage to the NYC Plaintiffs and to
8 public health and welfare.

9 901. Defendants’ creation and maintenance of, and contributions to, the public nuisance
10 of the youth mental health crisis through their conduct has directly and proximately caused injury
11 to the NY Plaintiffs. Defendants knew or reasonably should have known that their platforms were
12 causing harm to the mental health and wellbeing of children and teens, as their platforms were
13 designed to capitalize on the developmental vulnerabilities of this age group in order to “maximize
14 user engagement,” and Defendants deliberately employed features intended to cause frequent,
15 compulsive use of their platforms.

16 902. This harm to youth mental health and the corresponding effects on public health,
17 safety, and the welfare of the community outweigh any social utility of Defendants’ wrongful
18 conduct.

19 903. But for Defendants’ actions, youth in New York City would not use social media
20 platforms as frequently or long as they do today, would not be deluged with exploitive and
21 harmful content to the same degree, and would not have their mental health and ability to learn
22 adversely affected to the same degree. The associated harms suffered by NYC Plaintiffs would not
23

24 ¹⁰⁸⁴ Press Release, *Surgeon General Issues New Advisory About Effects Social Media Use Has on*
25 *Youth Mental Health*, U.S. Dep’t Health & Hum. Servs. (May 23, 2023),
[https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html)
26 [social-media-use-has-youth-mental-health.html](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html).

27 ¹⁰⁸⁵ *Advisory from the Commissioner of Health and Mental Hygiene of the City of New York*, N.Y.C.
28 (Jan. 24, 2024), [https://www.nyc.gov/assets/doh/downloads/pdf/notice/2023/coh-advisory-social-](https://www.nyc.gov/assets/doh/downloads/pdf/notice/2023/coh-advisory-social-media.pdf)
[media.pdf](https://www.nyc.gov/assets/doh/downloads/pdf/notice/2023/coh-advisory-social-media.pdf).

1 be incurred, and the public health crisis that currently exists as a result of Defendants' conduct
2 would have been averted.

3 904. The health and safety of New York City youth, including those who use, have used,
4 or will use Defendants' platforms, as well as those affected by others' use of their platforms, are
5 matters of substantial public interest and of legitimate concern to NYC Plaintiffs, who have
6 developed, designed, operated, and managed the complex and comprehensive network of public
7 mental health programs and services available for youth in the city.

8 905. As a direct and foreseeable consequence of Defendants' wrongful conduct, each of
9 the NYC Plaintiffs has been required to devote significant resources—in terms of funding,
10 employees, and time—as a result of, and seeking to address, the public nuisance youth mental
11 health crisis, by providing services to youth across the city, including through public schools,
12 public hospitals, and other city-wide programs.

13 906. NYC Plaintiffs have incurred and will continue to incur costs related to the youth
14 mental health crisis that Defendants created, caused, contributed to and/or maintained. NYC
15 Plaintiffs request an order providing for the abatement of the public nuisance that Defendants have
16 created, caused or contributed to, compensation for the damage or injury suffered, including actual
17 and compensatory damages in an amount to be determined at trial, and an order enjoining
18 Defendants from future conduct contributing to the public nuisance described above.

19 907. Defendants' conduct relating to their dangerous and addictive social media platforms
20 constituted malice and/or intentional, wanton, willful, or reckless disregard of NYC Plaintiffs'
21 rights, being fully aware of the probable dangerous consequences of the conduct and deliberately
22 failing to avoid those consequences.

23 908. Defendants' willful, knowing, and reckless conduct therefore warrants an award of
24 aggravated or punitive damages.

25 909. By reason of the foregoing, Defendants are liable, jointly and severally, for millions
26 of dollars resulting from this public nuisance, in an amount to be determined at trial.

27 **COUNT TWO — NEW YORK NEGLIGENCE**

28 910. NYC Plaintiffs incorporate by reference all preceding paragraphs.

1 911. Defendants have acted in ways that a reasonable person should recognize as
2 involving an unreasonable risk of invading the interests of another. Defendants knew or should
3 have known that their conduct designing, developing, marketing, supplying, promoting,
4 advertising, operating and distributing their social media platforms in the manner described above,
5 including by causing compulsive use and addiction, inflicted severe mental health harms on youth,
6 including children in schools and young residents in the community, and creating, causing and
7 contributing to the youth mental health crisis in New York City. Defendants knew and intended to
8 attract young people as a key customer group and to addict young people to their social media
9 platforms. Defendants knew or, in the exercise of reasonable care, should have known, that
10 targeting youth would cause harm to NYC Plaintiffs, who provide youth with educational and
11 mental health services. Defendants knew, or in the exercise of reasonable care, should have
12 known, that excessive use and addiction of youth to their platforms would result in disruption and
13 adverse impacts on schools and an interference with NYC Plaintiffs' operations. Defendants owed
14 NYC Plaintiffs a duty not to expose them to an unreasonable risk of harm, and to act with
15 reasonable care as a reasonably careful company would act under the circumstances. Defendants
16 violated their duty of reasonable care to NYC Plaintiffs by developing dangerous and addictive
17 social media platforms targeted to young people.

18 912. In addition, at all times relevant to this litigation, Defendants owed a duty to users
19 and the general public, including NYC Plaintiffs, to exercise reasonable care in providing
20 accurate, true, and correct information about the risks of using Defendants' platforms, and
21 appropriate, complete, and accurate warnings about the potential adverse effects of extended
22 social media use.

23 913. Defendants also knew, or in the exercise of reasonable care should have known, that
24 users and consumers of Defendants' social media platforms were unaware of the risks and the
25 magnitude of the risks associated with the use of Defendants' platforms, including but not limited
26 to the risks of extended or problematic social media use and social media addiction and the
27 likelihood that algorithm-based recommendations would harm youth mental health.

28 914. As such, Defendants, by action and inaction, representation and omission, breached

1 their duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably
2 careful person and/or company would act under the circumstances in the design, research,
3 development, testing, marketing, supply, promotion, advertisement, operation, and distribution of
4 their social media platforms, in that Defendants designed, researched, developed, tested, marketed,
5 supplied, promoted, advertised, operated, and distributed social media platforms that Defendants
6 knew or had reason to know would negatively impact the mental health of consumers, particularly
7 youth, and failed to prevent or adequately warn of these risks and injuries. This negative impact
8 on youth foreseeably harmed NYC Plaintiffs, as described above.

9 915. Public policy factors support the imposition of a duty on Defendants to exercise
10 reasonable care toward NYC Plaintiffs because any social utility of Defendants' conduct is greatly
11 outweighed by the harms of addicting youth to social media, causing a massive disruption to the
12 community and to the learning process and requiring additional expenditures by public health
13 departments, city hospitals, and public schools throughout NYC Plaintiffs' community.

14 916. Despite their ability and means to investigate, study, and test their social media
15 platforms and to provide adequate warnings, Defendants have failed to do so. Where Defendants
16 have investigated the extent to which their platforms are harming youth mental health, as
17 described above, they have not shared these findings with the public, and it is only the actions of
18 whistleblowers that have made some of these internal investigations public. Defendants have
19 wrongfully concealed information and have made false and/or misleading statements concerning
20 the safety and use of Defendants' social media platforms.

21 917. Defendants' negligence includes, but is not limited to:

- 22 a. Designing, researching, developing, marketing, supplying, promoting, advertising,
23 operating, and distributing their social media platforms without thorough and
24 adequate pre- and post-market testing;
- 25 b. Failing to sufficiently study and conduct necessary tests to determine whether or not
26 their social media platforms were safe for child and adolescent users;
- 27 c. Failing to use reasonable and prudent care in the research, design, development,
28 testing, marketing, supply, promotion, advertisement, operation, and distribution of

1 their social media platforms so as to avoid the risk of encouraging extended social
2 media use;

- 3 d. Designing their social media platforms to maximize the amount of time users spend
4 on the platform and causing excessive and problematic use of their platforms,
5 particularly among youth, through the use of algorithm-based feeds, social
6 reciprocity, and IVR;
- 7 e. Failing to implement adequate safeguards in the design and operation of their
8 platforms to ensure they would not encourage excessive and problematic use of their
9 platforms;
- 10 f. Designing and manufacturing their platforms to appeal to minors and young people
11 who lack the same cognitive development as adults and are particularly vulnerable to
12 social rewards like IVR and social reciprocity;
- 13 g. Failing to take adequate steps to prevent their platforms from being promoted,
14 distributed, and used by minors under the age of thirteen;
- 15 h. Failing to provide adequate warnings to child and adolescent users or parents who
16 Defendants could reasonably foresee would use their platforms;
- 17 i. Failing to disclose to, or warn, NYC Plaintiffs, users, consumers, and the general
18 public about the negative mental health consequences associated with social media
19 use, especially for children and adolescents;
- 20 j. Failing to disclose to NYC Plaintiffs, users, consumers, and the general public that
21 Defendants' platforms are designed to maximize the time users, particularly youth,
22 spend on Defendants' platforms, and that extended time on those platforms in turn
23 results in negative mental health outcomes;
- 24 k. Representing that Defendants' platforms were safe for child and adolescent users
25 when, in fact, Defendants knew or should have known that the platforms presented
26 acute mental health concerns for young users;
- 27 l. Failing to alert users and the general public, including NYC Plaintiffs' community
28 and NYC Public Schools students of the true risks of using Defendants' platforms;

- 1 m. Advertising, marketing, and recommending Defendants’ platforms while concealing
2 and failing to disclose or warn of the dangers known by Defendants to be associated
3 with, or caused by, youth use of Defendants’ platforms;
- 4 n. Continuing to design, research, develop, market, supply, promote, advertise, operate,
5 and distribute Defendants’ platforms with knowledge that Defendants’ platforms are
6 unreasonably unsafe, addictive, and dangerous to youth mental health;
- 7 o. Failing to modify Defendants’ algorithms in a manner that would no longer prioritize
8 maximizing the amount of time users spend on Defendants’ platforms over the safety
9 of its youth users; and
- 10 p. Committing other failures, acts, and omissions set forth herein.

11 918. Defendants knew or should have known that it was foreseeable that NYC Plaintiffs
12 would suffer injuries as a result of Defendants’ failure to exercise reasonable care in designing,
13 researching, developing, testing, marketing, supplying, promoting, advertising, operating, and
14 distributing Defendants’ platforms, particularly when Defendants’ platforms were designed,
15 developed, operated and marketed to maximize the time youth spend on Defendants’ platforms.

16 919. Defendants could have reasonably foreseen the probable harm caused by their
17 negligence. Each Defendant’s acts and omissions were a substantial factor in causing harm to
18 NYC Plaintiffs. The harms suffered by NYC Plaintiffs, as laid out above, would not have occurred
19 if not for Defendants’ negligence.

20 920. Defendants’ negligence helped to and did produce, and was the proximate cause of,
21 the injuries, harm, and economic losses that NYC Plaintiffs suffered and will continue to suffer,
22 and such injuries, harm, and economic losses would not have happened without Defendants’
23 negligence as described herein.

24 921. The mental health crisis caused and/or significantly contributed to by Defendants has
25 caused an ongoing behavioral disruption in NYC Plaintiffs’ schools and community, and NYC
26 Plaintiffs have had to take steps to mitigate the harm, inconvenience, and disruption caused by
27 Defendants’ conduct, as described above.

28 922. As a direct and foreseeable consequence of Defendants’ wrongful conduct, each of

1 the NYC Plaintiffs has been required to devote significant resources—in terms of funding,
2 employees, and time—as a result of the youth mental health crisis, to provide services to youth
3 across the city, including through public schools, public hospitals, and other city-wide programs.

4 923. NYC Plaintiffs have incurred and will continue to incur costs related to addressing
5 the youth mental health crisis that Defendants created, caused, contributed to and/or maintained.
6 NYC Plaintiffs request relief relating to the damage or injury they have suffered, including actual
7 and compensatory damages in an amount to be determined at trial.

8 924. Defendants’ conduct, as described above, was intended to serve their own interests
9 despite having reason to know and consciously disregarding a substantial risk that their conduct
10 might significantly injure the rights of others, including NYC Plaintiffs, and/or Defendants
11 consciously pursued a course of conduct knowing that it created a substantial risk of significant
12 harm to others, including NYC Plaintiffs. Defendants regularly risk the health of users of their
13 platforms with full knowledge of the dangers of their platforms. Defendants consciously decided
14 not to redesign, warn, or inform the unsuspecting public, including youth in NYC Plaintiffs’
15 community and NYC Plaintiffs. Defendants’ willful, knowing, and reckless conduct therefore
16 warrants an award of aggravated or punitive damages.

17 **COUNT THREE — NEW YORK GROSS NEGLIGENCE**

18 925. NYC Plaintiffs incorporate by reference all preceding paragraphs.

19 926. Defendants knew of the substantial risk of harm that their platforms posed to users’
20 mental health, particularly children and adolescents.

21 927. Defendants’ conduct, as described above, was intended to serve their own interests
22 despite having reason to know and consciously disregarding a substantial risk that their conduct
23 might significantly injure the rights of others, including NYC Plaintiffs, and/or Defendants
24 consciously pursued a course of conduct knowing that it created a substantial risk of significant
25 harm to others, including NYC Plaintiffs. Defendants regularly risk the health of users of their
26 platforms with full knowledge of the significant dangers of their platforms. Defendants
27 consciously decided not to redesign their platforms, or to warn or inform the unsuspecting public,
28 including NYC Public Schools students, NYC youth, and NYC Plaintiffs, despite knowing the

1 probable consequences would be to increase mental health issues among youth and to cause a
2 major disruptive behavioral situation in NYC Public Schools' campuses and interfere with NYC
3 Plaintiffs' missions.

4 928. Defendants thereby recklessly disregarded or were indifferent to the rights of others,
5 including NYC Public Schools students, New York City youth, and NYC Plaintiffs, and were
6 indifferent to the probable consequences of designing their platforms to maximize the amount of
7 time youth spend using social media. Defendants' indifference to the safety of others and
8 indifference to the probable consequences of its acts caused NYC Plaintiffs to suffer harm.

9 929. Ultimately, Defendants' gross negligence caused or was a substantial factor in
10 causing foreseeable harm to NYC Plaintiffs and other economic losses in an amount to be proven
11 at trial.

12 930. Defendants' willful, knowing, and reckless conduct therefore warrants an award of
13 aggravated or punitive damages.

14 **VI. DEMAND FOR A JURY TRIAL**

15 931. NYC Plaintiffs hereby demand a trial by jury.

16 **VII. PRAYER FOR RELIEF**

17 WHEREFORE, NYC Plaintiffs pray for judgment as follows:

18 932. Entering an Order that the conduct alleged herein constitutes a public nuisance under
19 New York law;

20 933. Entering an Order that Defendants are jointly and severally liable;

21 934. Entering an Order requiring Defendants to abate the public nuisance described herein
22 and to deter and/or prevent the resumption of such nuisance;

23 935. Enjoining Defendants from engaging in further actions causing or contributing to the
24 public nuisance as described herein; and

25 936. Awarding equitable relief to fund prevention education and mental health treatment;

26 937. Awarding actual and compensatory damages;

27 938. Awarding punitive damages;

28 939. Awarding reasonable attorneys' fees and costs of suit;

1 940. Awarding pre-judgment and post-judgment interest; and
2 941. Such other and further relief as the Court deems just and proper under the
3 circumstances.

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5 RESPECTFULLY SUBMITTED this 14th day of February, 2024.

6 **HON. SYLVIA O. HINDS-RADIX**
7 Corporation Counsel of the
8 City of New York
9 100 Church Street, Rm 20-87
10 New York, NY 10007
11 Tel: (212) 356-2276

12 By /s/ 
13 Melanie C.T. Ash
14 Aatif Iqbal
15 Assistant Corporation Counsels
16 Email: mash@law.nyc.gov
17 aiqbal@law.nyc.gov
18 *Attorneys for Plaintiffs*

KELLER ROHRBACK L.L.P.

By 
Dean N. Kawamoto (SBN 232032)
Alison S. Gaffney
Felicia Craick
Chris Ryder
Gretchen Freeman Cappio
Cari C. Laufenberg
Derek W. Loeser
Garrett A. Heilman
1201 Third Avenue, Suite 3200
Seattle, WA 98101
Telephone: 206.623.1900
Facsimile: 206.623.3384
Email: dkawamoto@kellerrohrback.com
agaffney@kellerrohrback.com
fcraick@kellerrohrback.com
cryder@kellerrohrback.com
gcappio@kellerrohrback.com
claufenberg@kellerrohrback.com
dloeser@kellerrohrback.com
gheilman@kellerrohrback.com

Christopher Springer (SBN 291180)
801 Garden Street, Suite 301
Santa Barbara, CA 93101
Telephone: 805.456.1496
Facsimile: 805.456.1497
Email: cspringer@kellerrohrback.com

Attorneys for Plaintiffs

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